

ANNUAL REPORT

OF THE

DEPARTMENT OF AGRICULTURE

OF THE

PROVINCE OF ALBERTA

FOR THE YEAR

1937

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

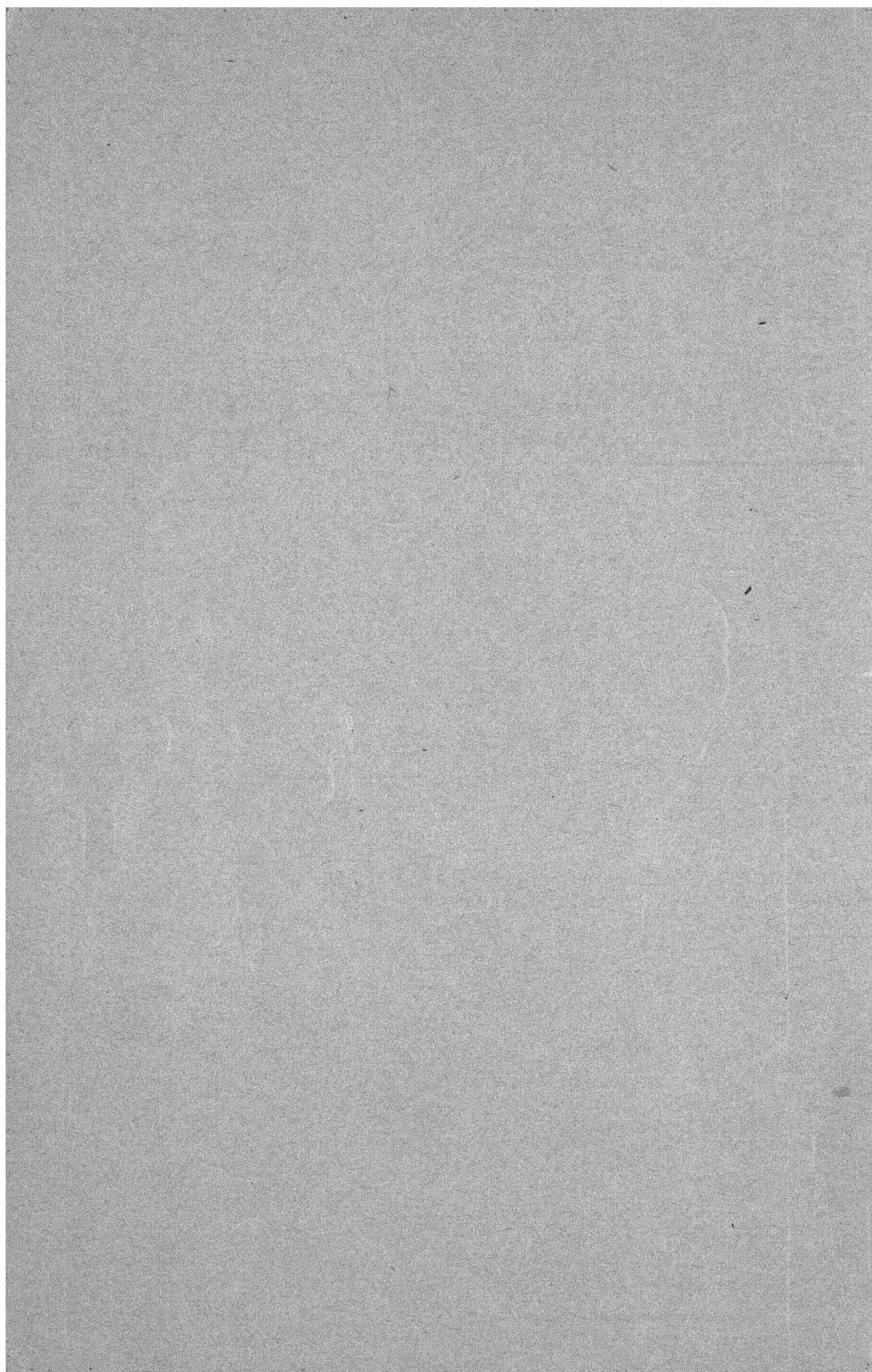


EDMONTON:

Printed by A. Shnitka, King's Printer
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TO HIS HONOUR,

J. C. BOWEN,

Lieutenant Governor of the Province of Alberta.

SIR,—

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1937.

I have the honour to be, Sir,

Your obedient servant,

D. B. MULLEN,

Minister of Agriculture.

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DEPARTMENT OF AGRICULTURE

1937.

HON. D. B. MULLEN, Minister of Agriculture and
Acting Live Stock Commissioner.

Heads of Branches

H. A. Craig, Deputy Minister and Superintendent of Schools of Agriculture.

P. W. Johnson, Secretary to the Department.

P. R. Talbot, V.S., Provincial Veterinarian.

J. R. Sweeney, Dairy Commissioner.

O. S. Longman, Field Crops Commissioner.

C. W. Traves, Poultry Commissioner.

W. H. Wallace, Fish and Game Commissioner.

S. O. Hillerud, Provincial Apiarist.

W. J. Elliott, Director of Junior Activities.

Jas. Murray, Principal, Olds School of Agriculture.

S. H. Gandier, Principal Vermilion School of Agriculture.

REPORT OF THE DEPUTY MINISTER

THE HONOURABLE D. B. MULLEN,
Minister of Agriculture.

SIR,—

I have the honour to submit herewith the Report of the Department for the year 1937.

The crop of 1937 was seeded under favourable conditions. The early part of the growing season was especially dry over a large portion of the Province, continuing so until about the middle of July. Rains occurred at this time and resulted in a heavy growth of crop over the Central Western section. The dry hot weather continued so long that the East Central section of the Province suffered severely. This latter area produced very little fodder for winter feed.

The Federal and Provincial Governments adopted a policy which provided for the marketing of large numbers of cattle from this area. The policy included measures for supplying feed to the balance of the live stock remaining, provided each farmer reduced his holdings to a certain number.

The winter feeding of beef cattle has not been undertaken on such an extensive scale as usual, owing to the fact that the price of feeders in relation to the price of grain did not seem to hold out as great a prospect for profit as in previous years.

Lamb feeding has been quite profitable of late, and as a result fairly large numbers of lambs went into the feed lots in the early Fall. The reduction in the tariff against the importation of Australian and New Zealand lamb has affected the price of finished lambs in Canada. Up to the present, therefore, the business of lamb feeding has not proven to be particularly profitable this season.

The Province produced a large quantity of good quality seed grain, as a result substantial amounts of seed are being purchased at the present time for shipment to Saskatchewan, and to some of the Eastern provinces.

The dairy, hog and poultry industries continue to provide a substantial revenue. The quality of hogs continues to improve, so that we now have reached a position where over 60% of the hogs marketed at Stock Yards and Abbatoirs qualify for the bacon or select grades. The improvement in this respect has been particularly rapid during the past few years.

Improvement in the quality of Alberta butter has been marked in the past year to two. It is significant that this Province won 49% of the total of all prizes awarded at the 10 Class "A" Canadian Exhibitions, and in addition won 44.6% of all the first prizes at these Exhibitions. It is encouraging also to know that 87% of all the butter graded in the Province was first grade butter, placing Alberta in the lead of the other provinces

in this respect. In addition to the improvement in quality, it is very satisfactory to know that the Province this year reached an all time high production of 26 million lbs., of butter.

The total estimated value of agricultural production for 1937, is substantially in advance of the value of this production for 1936. This is partially accounted for by an actual increase in production, and partially by a slight increase in the unit value of the different commodities.

The heads of branches of the various Departments have submitted reports dealing with the activities directly under their supervision. Detailed information respecting the different branches will be found in these reports.

Respectfully submitted,

H. A. CRAIG,

Deputy Minister.

REPORT OF THE PROVINCIAL VETERINARIAN

(DR. P. R. TALBOT)

As explained in previous reports, the duties of the Provincial Veterinarian's Branch are many and include the following:—The prevention and control of diseases of animals that do not come under the Animal Contagious Diseases Act of the Federal Government; assistance to those living in outlying districts where the services of a veterinarian are not available; supervision of the health of the live stock at Provincial Government Institutions; lecturing at the University of Alberta on veterinary science, as well as at the various Short courses held during the year; supervision and conducting of experimental work in relation to diseases found peculiar to animals in this Province; conducting of meetings in relation to diseases of live stock in various parts of the Province; carrying out the provisions of The Stallion Enrolment Act; promoting the Provincial Co-operative Purchasing Plan for Pure-bred Stallions.

HORSES.

There has been little change in the diseases affecting horses during the past year. A large number of cases of Equine Anaemia have been reported, especially in the northern part of the Province. As explained in previous reports, this disease occurs principally in sparsely settled areas, where the horses have been fed largely on slough hay or pastured on low land, where they have had access to slough water. We investigated a large number of cases in the vicinity of Lesser Slave Lake during the past summer, and the fact that so many animals were affected in that area maybe attributed to the fact that the previous year much of the territory was flooded during the spring, leaving accumulated water in depressions which could not escape except by evaporation. On account of the land being so saturated, it made an ideal breeding ground for bacteria of different kinds, and the probability is that many horses became affected in this way. In addition, the grass on this land was most luxuriant and was put up in large quantities for hay, that was fed during the winter months. It is generally accepted that forage grown on marshy ground is a contributing factor in the development of this form of anaemia, and it is our opinion that some of the trouble may be due to this source. From our observations, we find that many of the horses in northern Alberta are affected with parasites of various kinds. Some authorities are going so far as to state that they are a direct cause of the disease. We are finding that horsemen who are systematically treating their horses with a reliable parasiticide are not having the trouble with anaemia as those who are not applying these remedies.

We have carried on the programme started some years ago of holding meetings in outlying districts where the services of a qualified veterinarian are not available and giving advice in the way of prevention and control of the disease. These meetings have met with an enthusiastic reception wherever held and many claim the information given at such gatherings has been responsible in lessening their losses to a considerable degree.

The losses from what is considered a Botulism, were greater during the past year than in the previous one. On account of the similarity between this disease and Equine Encephalomyelitis a very close watch was kept over all cases reported to this office, and it is with considerable satisfaction that we can report that not one case of the last mentioned disease was diagnosed as such in Alberta during 1937. Both Saskatchewan and Manitoba suffered serious losses from Encephalomyelitis, and in spite of the strenuous efforts made to control the disease, it reached alarming proportions. We took the precaution of writing all qualified practising veterinarians asking them to notify this Department should any suspicious cases come under their observation, in order that if a case was diagnosed as such, we could take immediate steps to control it. Few of these men have had an opportunity of seeing a previous case, as up to last year, the disease was confined on this continent to the United States. We appreciated very much the co-operation given by these veterinarians, and although numerous cases were reported, and each suspected animal watched closely for development of Encephalomyelitis, none showed positive diagnostic symptoms. There is a possibility that Encephalomyelitis may appear in Alberta this coming year. One can naturally expect such an outbreak for the disease is gradually extending to the line between Saskatchewan and Alberta, but as climatic conditions may play a part in the distribution of the organism it is to be hoped, that the disease may be arrested before coming into Alberta.

CATTLE

Many cases of Hemorrhagic Septicemia in both the respiratory and intestinal forms have occurred during 1937. Several severe outbreaks developed in a few districts, and the losses were considerable before the disease could be checked. The greatest number of deaths took place where the cattle had been purchased at the stockyards or some outlying point and shipped by train or truck to the farms for feeding purposes. In the early winter climatic conditions appeared particularly favourable to the development of the disease. As a rule the trouble can be prevented and controlled by vaccination, but treatment, especially when the respiratory organs are involved is not always satisfactory.

Blackleg.—Blackleg has been particularly prevalent during the past year, but this may partly be due to the fact that cattle from the dry areas have been brought into central and northern Alberta. Unless cattle have been vaccinated regularly against Blackleg, they seem to be susceptible when exposed to the organism producing the disease, and we have found many of these farmers who are changing their location, are not familiar with Blackleg, and not accustomed to the preventive measures employed. We also find many men, especially in northern Alberta who are still using the Pill Form of Vaccine, instead of the newer products which are more satisfactory to administer and produce an immunity for a much longer period.

SWINE.

The combatting of diseases in swine is requiring more time each year. The rapid increase in swine production is resulting in more ailments and epidemics occurring in this class of animal. During the past summer, it was necessary

for us to make a survey of many premises where swine were being kept and to gather information regarding diseases that had, and were causing losses among the swine on these farms. The facts were forcibly brought out that on practically all the farms visited little or no attention was given to disinfection of the hog houses, to protection of young pigs against parasites, or providing new pastures to take the place of those that had been in continuous use for many years. These things have all a great bearing on the health of our swine, and will have to be brought to the attention of all those engaged in the raising of swine. For a number of years, attempts have been made at public meetings, and through the distribution of bulletins to bring these facts to the attention of the farmer, but the impression seems to exist that the hog is not susceptible to disease to the same extent at least, as other farm animals. The bulletin issued by the University of Alberta entitled "Swine Production in Alberta" has been distributed widely through this Branch, due partly to the fact that when the bulletin was published, some of the common ailments of swine were described in the last pages of the publication.

It is interesting to note there has been little change in the diseases affecting swine during the past two or three years, but the increase in parasitic infestation, particularly in some districts, is noticeable. It is our opinion that much of our losses in swine could be prevented if more attention was given to sanitary precautions of hog houses, as well as seeing that they are properly ventilated; the proper care of brood sows before and after farrowing; careful attention to the young pigs immediately after they are born; and continually guarding against the danger of the young pigs becoming infested with parasites.

WEED POISONING.

Each year the losses caused from animals eating poisonous plants increase, this is partially due, no doubt, to the ranges being pastured too closely. In the northern part of the Province, however, numerous losses are reported among cattle from eating the "Water Hemlock Plant". The danger period is in early spring when the first green shoots appear, and the cattle after being forced to consume dry feed for so many months, are naturally attracted to succulent forage. In some districts this weed is so plentiful that the task of pulling or digging up the roots and burning them, has become an impossible task and under such circumstances it is recommended that the danger zones be fenced.

It is interesting to find that losses among swine which occurred during the past year, were traced directly to this class of animal being pastured in hog lots where they had access to sloughs containing this weed. In all cases, with both cattle and swine, it should be noted that the losses took place during late spring or early summer and fewer cases were reported after the plant attains its growth, when it is considered that it loses its poisonous action.

In northern Alberta we also had occasion to investigate cases of poisoning among both cattle and horses, the result of eating the "Larkspur". In the southern part of the Province in the vicinity of the foothills of the Rocky Mountains, we also have this plant to contend with. Like the

Water Hemlock, most of the deaths from the Larkspur are reported in early spring when the plants appear to be more poisonous.

In Southern Alberta range lands the Death Camas and Locos cause the most frequent losses, the former being particularly dangerous to sheep. Most sheep men know the location of these poison areas and manage to herd the flocks so as to avoid them.

We have an excellent bulletin entitled "Weeds Poisonous to Live Stock". This has been distributed widely throughout the Province and has done a great deal to familiarize the farmers and stockmen with the various poisonous plants.

DISEASES OF FUR-BEARING ANIMALS.

Fur ranches, engaged principally in the breeding of fox and mink are scattered from one end of the Province to the other. We believe that climatic conditions make Alberta suitable for the production of fur. The industry is well organized and the number of ranches will no doubt increase enormously during the next few years. The raising of foxes and mink merits particular attention from the standpoint of sanitation and disease, and the protection of the health of fur-bearing animals in captivity should and will require special attention, from now on. Malnutrition, the result of improper feeding and faulty diet are, as a rule, the introduction to most of the troubles affecting these animals. The lowering of resistance against disease, the result of mistakes in feeding, makes the animals susceptible to epezootic and subject to the invasion of internal and external parasites.

Unsanitary surroundings on our fur farms may be due to lack of information, carelessness or indifference, but if the fur farmer is going to make a success of this important industry, he will have to pay particular attention to the cleanliness of the food given to the animals, the feeding utensils used, and the regular disinfection of the yards and pens.

Up to the present, we have been fortunate in escaping serious epidemics on our fur farms. Any outbreaks which have occurred have taken place on individual farms, and were not general over wide areas. Possibly one of the most serious that has come under our observation took place on two fox farms in the vicinity of Edmonton last summer, and fortunately it was kept within the boundaries of these farms.

It is not our intention to go into the technical details of this outbreak other than to bring attention to the enormous amount of work required to find the cause of an outbreak of disease on a fox farm, when the cause is of unknown origin, and when there is no available information to assist in making a diagnosis. When the recent outbreak occurred the co-operation of Dr. Rankin, Dean of the Medical College, University of Alberta, and Dr. R. M. Shaw, Assistant Bacteriologist of that Institution was obtained, and post mortem examinations were conducted as well as experimental work done in an endeavour to transmit the disease to healthy animals to see if the trouble was contagious. Specimens of diseased animals, as well as cultures believed to contain the virulent organisms were forwarded to Laboratories in Great Britain, United States and Canada, and it is gratifying to note that Dr. Scott, Pathological Laboratory,

Ministry of Health London, England, as well as the Lederle Laboratories, Pearl River, New York, verified the findings of the University of Alberta. Dr. J. A. Allen, Pathologist and Superintendent of the Experimental Fur Farm, University of Manitoba, who was consulted regarding the outbreak, and who made a careful investigation into the whole problem agreed entirely with the findings of the above institutions. The Belmont Fur Farm gave us every possible co-operation and made it possible to conduct experiments in the way of animals with which to try out vaccines and bacterins in an endeavour to establish an efficient immunity.

We have reason to believe that through the experience gained last summer, we should be in a better position to cope with future outbreaks should they arise, but the fact remains that we lack technical knowledge regarding the diseases of fur-bearing animals as well as experimental laboratory facilities, where careful experiments could be made. In addition to these things, the need of an animal pathologist, who has been especially trained in the diseases of fur-bearing animals is becoming more apparent. Should fur-farming develop, and we have every reason to believe that it will, one can easily understand how the services of such a man would not only be of great value, but practically essential.

In the meantime, sanitation is of first importance in the proper management of a fur farm. The efforts of every fur farmer should be, not so much to discover disease, but rather by constant vigilance to maintain effective ways of preventing it. If a high standard of sanitary precautions is kept up, we feel satisfied the dangers of epidemics occurring on our fur bearing animals in captivity can be prevented.

DOPING OF RACE HORSES

This work was started in 1936 and continued in 1937. Saliva samples were collected at both the Calgary and Edmonton Race Meets and forwarded to Mr. J. A. Kelso, Provincial Analyst, University of Alberta, who made examinations for the presence of narcotics. On account of the detrimental effect certain drugs have on the health of horses, it was considered advisable that steps be taken to ascertain if the administration of such drugs was being practised on the racing circuits of the Province. Saliva samples were taken from certain horses in each race, with the result that considerable more confidence is felt in racing by the public in general. To those who are interested in fair and honest racing, the efforts made to stamp out doping have met with a most enthusiastic reception, and have done considerable to encourage the breeding of the thoroughbred horse. Upon several occasions during the past few months, horses that have for various reasons been forced to retire from the track as being no longer useful for racing purposes, have been purchased by individuals as a nucleus for the breeding of thoroughbreds. The experience has been in the past that horses that have been given narcotics over a period of years, are not satisfactory for breeding for many months and then require special care.

CO-OPERATIVE PURCHASING PLAN FOR PURE-BRED STALLIONS

In connection with the Co-operative Purchasing Plan for stallions, this work is handled by Mr. Chester Reynolds. He has been most capable in

carrying on this enterprise and the success of this plan has been due entirely to his efforts. Few realize the great amount of work entailed in organizing these groups. It necessitates long hours over bad roads, holding meetings in the coldest weather and sorting the stallions to suit the needs of the community into which they are going, and in addition the various groups have to be satisfied with the horse they are getting at time of selection. After the horse has been placed, the groups have to be visited from time to time as there are always difficulties to be smoothed out in order that the organization may run harmoniously.

That the Provincial Co-operative Purchasing Policy, which has been in effect during the past three years is becoming increasing popular, is apparent as the following results will show. In the year 1935, there were fifteen clubs organized, to which the Department paid freight on stallions. In 1936, eighteen clubs were formed, and in 1937, thirty clubs, making a total of sixty-three active clubs to date. In addition to these there are a number of clubs operating under this policy, which did not receive freight assistance on stallions.

The stallions placed under this policy have been of the best quality procurable in the Province, averaging in price six hundred and fifty dollars, and include all the heavy draft breeds. As most of these clubs were organized in districts, in which formerly none but grade or inferior quality stallions were available, a great improvement in the quality of horses in these districts can be expected in the near future, and in addition, beneficial results have been obtained for the pure-bred horse breeders of the Province, in making available a ready market for their stallions. It is to be expected, due to the unquestionable economy of this policy to breeders, that it will only be a short time until inferior stallions, which have been a menace to our horse industry, will be practically eliminated.

Judging from the numerous inquiries in recent months, regarding this policy, there is reason to believe that a much larger number of clubs will be formed in the near future than in previous years, and at present there is available in the Province a good selection of stallions that can be purchased at reasonable prices.

In conjunction with the Co-operative Purchasing Policy, colt shows were held during the fall months in twelve different districts. Colts competing in these shows had to be sired by horses purchased under this policy. Silver cups were donated by the Alberta Percheron Club, The Alberta Clydesdale Association and by Mr. E. Shore, President of the Alberta Belgian Breeders' Association. These cups were awarded the owner of colt standing first in each class. In addition ribbons were contributed by the Department, and in some districts, local boards of trade donated substantial prizes. Before the judging took place, instructive addresses were given on the care of foals, etc., all of which was very much appreciated by those in attendance. Mr. H. E. Salter, Secretary of the Alberta Percheron Club, and Mr. L. Rye, President of the Alberta Clydesdale Association acted as judges for their respective breeds at these shows. In most districts where these shows were held members of clubs are looking forward towards making the show an annual event, and enlarging it so that in time these outlying districts will have a complete agricultural fall fair.

STALLION ENROLMENT

Stallions enrolled under The Stallion Enrolment Act for the year 1937 show an increase over the previous year of fifty-three head. This is the largest enrolment since the year 1922, and would signify that grade and inferior stallions which came into common use during the years when the market value reached a low figure, are rapidly being eliminated.

During the past year two hundred and twenty-one stallions were inspected, and of this number one hundred and seventy-two were passed and granted enrolment certificates. Thirty-seven were turned down as undesirable, and twelve were granted one year for reinspection. Due to the fact that our inspector could not arrange inspection of all stallions on the list, "Without Examination" certificates were granted for the season to an additional number.

In the inspection of these stallions, careful consideration was given by our inspector, Mr. Dollar, to the general conformation and hereditary unsoundness, which policy will tend to eliminate undesirable defects in our breeding stock, and raise the general standard of our horse population.

The following table shows the total number and breed of stallions enrolled during the year 1937:—

Percherons	399
Clydesdales	250
Belgians	118
Shire	17
Suffolks	10
Light Horses	32
Total	<u>826</u>

REPORT OF THE FIELD CROPS COMMISSIONER

(O. S. LONGMAN)

The 1937 crop was considerably below the average for the past several years. There was a lack of moisture throughout the whole of the Province until July rains brought relief in the Western and Northern areas but rain failed to come in time for the production of satisfactory crops in the East, Central and South-eastern areas. The July rains resulted in a second growth crop which on the whole ripened, as Fall frosts were later than usual. The Edmonton District benefited more from this condition than other parts of the Province.

The improved prices for grain obtained in 1936 were maintained in 1937. There was little frost damage, but the quality of cereal crops was lowered considerably by immaturity caused through second growth conditions prevalent in a large area in Western and Northern districts. Large areas of promising crop was destroyed or damaged by hail; the districts mostly affected being Carstairs to Drumheller, Bittern Lake to Minburn, and the Okotoks District. Losses were lower, however, than in 1936.

The acreage devoted to hay and pasture crops continues to increase. Many farmers are seeding considerable acreages with Alfalfa or mixtures of Alfalfa with grasses such as Brome and Crested Wheat Grass. A shortage of seed no doubt limited a greater extension of forage crop acreage in 1937. Available seed was sold at remarkably good prices.

The following table shows the estimated acreage and production of field crops in Alberta in 1937:

	Acres	Bushels
Wheat	7,834,000	74,000,000
Oats	2,789,000	77,000,000
Barley	995,300	22,100,000
Flax	20,000	124,000
Alfalfa Seed	83,000	156,000 tons
Sugar Beets	20,000	233,000 tons
Hay and Clover	356,500	438,000 tons
Rye	155,000	1,185,000 bushels

WEED CONTROL

The Noxious Weed Act was enforced by six field supervisors who co-operated with municipal weed inspectors and sixteen inspectors appointed to enforce the Act in unorganized territory.

Weed control in the Province is not in a very satisfactory condition. Many municipal councils either do not appoint an inspector or make the appropriation so low that effective work cannot be done. Sufficient funds are not available from Improvement Districts to properly enforce the Act in these areas. The result of this lack of inspection is a gradual spreading of noxious weeds over the Province. Seeds of Perennial Sow Thistle and Canada Thistle blow when ripe for many miles at harvest time, thus contaminating clean farm land. Unless this problem is attacked in the proper spirit it is only a matter of a few years until every farm in Northern and Western Alberta will be infested with these two weeds.

A special effort was made to stamp out small infestations of Hoary Cress, Leafy Spurge and Russian Knapweed. Chemical was supplied to

79 farmers to apply on patches of these weeds. A total of 10,200 pounds of Sodium chlorate was provided for this purpose.

The following summary shows activities with respect to weed control.

Number of field supervisors	6
Number of Improvement District weed inspectors	16
Number of municipal weed inspectors	360
Number of Improvement Districts covered	93
Number of Municipal Districts covered	128

SEED SHOWS

The policy established in 1935 of holding district seed shows was continued. These shows were held at Grande Prairie, Lethbridge, Calgary and Edmonton. At Edmonton the first prize exhibits at the four district shows were assembled and the Provincial competition was judged to determine the best samples of each kind of seed in the Province. It would appear that the plan of holding district shows has considerable value as seed growers have greater interest in a local show than a Provincial Seed Fair at some distant point. In addition many farmers and prospective purchasers of pure seed avail themselves of the opportunity to visit a local show.

Entries at the respective district shows are as follows:—

	Open Classes	Junior Classes	Total
Grande Prairie	61	26	87
Lethbridge	160	32	192
Calgary	72	34	106
Edmonton	104	41	145
Total	397	133	530

The usual assistance was given to growers in assembling seed exhibits for the International Grain & Hay Show, Chicago and the Royal Winter Fair, Toronto. In order to encourage growers to exhibit at these shows, duplication of prize money and honorariums were offered for winning samples. Exhibitors from this Province continued to win high honours at both the Chicago and Toronto Shows. Their achievements are as follows:—

ROYAL WINTER FAIR, TORONTO

Number of entries	93
Number of prizes won	91
Number of championships	5

INTERNATIONAL GRAIN AND HAY SHOW, CHICAGO

Number of entries	59
Number of prizes won	52
Number of championships	2

Victor Watson of Airdrie won the oat championship and James Sebastian of Wembley the wheat championship at Toronto. John Hamilton of Coaldale won first prize for field beans and Geo. Topolnisky of Sniatyn was first for oats at the Chicago Show.

INSECT PEST CONTROL

The grasshopper infestation in Alberta in 1937 was somewhat larger than expected in so far as the amount of bait spread was concerned.

The area where the outbreak occurred consisted of about 26,000,000 acres of the Province lying south and east of a line drawn from Township

45 on the 4th Meridian to Township 31 on the 5th Meridian, thence south to the International Boundary. Within this area, the south-east corner was not badly infested, but elsewhere the outbreak varied from very light to very severe. Most severe outbreaks occurred around Claresholm and Stavely and in the Drumheller District.

The outbreak of 1937 was a continuation of the infestation that began in 1931. The recurrence of outbreaks during this protracted period has been largely due to the climatic conditions that prevailed. It is to be hoped the general rains in the late summer of this year will be followed by adverse weather for egg laying and a wet spring in 1938.

The control campaign for 1937 was conducted along the same lines as previous years. Six fieldmen gave general supervision in municipalities, and supervised the operation of stations in improvement districts. Some municipalities took more interest than usual in control measures and enforcement of The Pests Act by giving greater publicity to the campaign. Such interest on the part of local officials is most valuable from the standpoint of efficient control.

Materials for mixing bait were available at all times. Sawdust was quite plentiful, but due to the high cost of bran and an anticipated scarcity, the amount of bran in the bait was cut down from 40% to 25% or less.

A new development in the control campaign was the increased use of mechanical spreaders. In most cases these were made from parts of old machinery, and their use was quite general in a number of districts. This labour-saving device increased materially the amount of bait spread, and on this account it was felt that the reduction in the proportion of the costly ingredients of the bait was warranted. The use of these spreaders necessitates a uniform bait without lumps or sticks so that a small, even flow of bait may be maintained from the container to the spreading equipment.

A further attempt to encourage farmers to spread more bait was made by providing funds to pay farmers to spread bait on vacant Crown Lands adjacent to their farms. This policy was not taken advantage of by any of the farmers. In the late stages of the campaign every effort was made to encourage farmers to continue late poisoning, and to carry out a system of fall cultivation in order to expose the eggs to the elements. Very satisfactory results were obtained from the bait during this year, and few complaints were received.

The stations began to operate about May 15th, and nearly all of them were closed by the 14th of August. General rains subsequent to July 15th over most of the grasshopper territory retarded the activity of the pest, aided the farmers with their control measures and lessened the damage to crops.

The following is a summary of the campaign:—

Acres of land in area	26,000,000
Acres of crop land menaced	2,872,000
Number of stations in operation	124
Amount of poison bait spread	28,574,000 lbs.
Number of farmers receiving bait	10,172
Estimated damage	7.4 per cent
Estimated crop saved	32.3 per cent
Bait used: Sawdust	11,517,000 lbs.
Bran	2,500,690 lbs.
Sodium Arsenite	42,790 lbs.
Sodium Fluosilicate	76,910 lbs.

JUNIOR GRAIN CLUBS

The Junior Grain Club movement continues to be the major seed improvement programme in districts where the clubs operate. At the time of organization, each member is supplied with from 4½ to 9 bushels of Registered wheat, oats or barley. During the second and following seasons each club member has large acreages of improved seed available for use on his own farm or for sale in the district. It is estimated that well over half a million bushels of pure to variety seed was grown by the grain club members in 1937.

The follow companies have continued to sponsor grain clubs this year:—Wheat clubs, Alberta Wheat Pool; Oat clubs, United Grain Growers, Ltd.; Barley clubs, Canada Malting Company, Flax Clubs, Alberta Linseed Oil Company. These organizations provide a large part of the cost of the seed to new clubs and in addition offer prizes and free trips to encourage members to rogue their plots, thus maintaining the purity of the seed. Eighty-two club members participated in the free trip programme which consisted of a two-day agricultural short course and appropriate entertainment at one of the district seed fairs.

Grain clubs and membership in 1937 were as follows:—

	Members obtaining New Seed	Number of Clubs	Members
Wheat	518	54	723
Oat	159	17	336
Barley	77	9	135
Flax	22	2	36
Potatoes	26	2	38
Total	802	84	1,268

In the National Grain Judging Competitions at Toronto in November, the Alberta team consisting of Albert Allsop and Lloyd Rigby both of Wembley won first place with an unusually high score. Wheat club members from Alberta won 21 out of 25 placings in the junior wheat class at the Royal Agricultural Show, Toronto. This class is open to all wheat clubs in Canada. Alberta boys lost only the fourth, eighteenth, twenty-third and twenty-fourth prizes. In oats, club members from this Province won first, second, third and fourth, and in early oats, first and third; and in barley, first, second, fifth and tenth. It is of interest to note that junior grain club members won 17 prizes at the International Show, Chicago, including first prize in oats, obtained by Geo. Topolnisky of Willingdon, and 37 prizes at the Royal Show, Toronto, including first prize and championship for wheat, won by James Sebastian of Wembley, and first prize in oats won by Justyn Rigby of Wembley.

SEED EXCHANGE POLICY

The volume of seed moved under this policy was practically double that of the preceding year. The short crop in many districts during 1936 caused many grain growers to be short of suitable seed in the Spring of 1937. Due to free freight on field inspected seed and premiums paid by the Dominion Government, pure seed could be delivered at points where required at approximately the same price as commercial seed of much lower quality and purity. The policy has undoubtedly improved the purity of variety

of seed in many districts in this Province. The grain companies gave their services without charge in weighing the grain and recording deliveries, as well as paying track prices for grain delivered in exchange for seed.

Sixty-one cars were handled as follows:—Wheat 15,551 bushels; Oats 93,121 bushels. A total of 3,423 farmers obtained seed under the policy.

The Dominion Department of Agriculture continued their free freight on Registered and Certified Seed. Approximately 18,000 bushels of seed sealed in sacks was moved in this way.

FORAGE CROP PROGRAMME

The Dominion-Provincial Forage Crop Programme was continued in 1937. Changes were made in the policy whereby 16 municipalities contributed an equal amount with the two governments in the purchase of seed distributed at one-half the cost to farmers in the respective municipalities. Seed also was distributed in six improvement districts.

The distribution of seed was as follows:—

	Seed Distributed (Pounds)	Number of farmers Participating
Sweet Clover	19,305	321
Alfalfa	20,301	508
Brome	9,279	185
Timothy	6,200	310
Alsike	5,400	270
Crested Wheat	18,787	642
Altaswede	6,153	205
Creeping Red Fescue	270	16
Total	85,695 lbs.	2,457

There is no doubt that many farmers obtained forage crop seed under this arrangement who would not have obtained their requirements in any other way. Many farmers obtaining pure, clean seed under the policy have raised seed crops. This has resulted in more forage crop seed being available in many localities in the Province.

DISTRICT SEED CLEANERS

Commencing in 1931 portable grain cleaners were located in the following districts:—Fairview, Grande Prairie, Lacombe, South Edmonton, Sangudo, Vegreville and Camrose. These cleaning assemblies are all in operation and continue to serve the districts where located. From information to hand approximately 280,000 bushels of grain and 40,000 pounds of forage crop seed were cleaned in 1937. With the aid of subventions from the Dominion Government and an equal amount from the Provincial Department of Agriculture the cleaners are placed in country districts. The Associations obtaining the machines refund one-third the cost over a period of years.

ALBERTA SEED GROWERS' ASSOCIATION

This Association has as members, the growers of Registered and Certified Seed in the Province. As the growers' marketing organization it co-operates with the Field Crops Branch in arranging the distribution of pure to variety seed. Sixty-one cars of seed were handled during the season.

The Association publishes a price list each spring listing growers who have Registered or Certified seed for sale. The list is the means of bringing the buyer and seller together, thus increasing the quantity of improved seed purchased and used in the Province.

During 1937 the officers of this Association were: President, H. P. Wright, Vice-President, T. H. Howes, Directors, A. M. Smith, R. Mueller, H. G. Houlton, J. A. Bradley, O. S. Longman, Justyn Rigby and R. Sharpe; Secretary, E. H. Buckingham.

ALBERTA POTATO GROWERS' ASSOCIATION

This Association co-operates with the Branch in furthering the interests of Certified Potato growers and consequently the distribution of improved seed through the Province. Local associations function at Lacombe, Millet, Warburg and Sedgewick.

The annual meeting was held at the Experimental Farm, Lacombe on August 10th.

The officers of this Association during 1937 were: President, F. T. Rickett, Vice-President, T. H. Howes, Directors, John Ferguson, Chas. Scott, J. A. Bradley, W. C. Dowdell, Chas. Ball, Secretary, E. H. Buckingham.

CROP IMPROVEMENT FIELD DAYS

Employees of this Branch co-operated with the National Crop Testing Plan in conducting field days at 18 points. Junior Grain Club field days were held at 14 central points. Members from 84 clubs participated in the junior field days. Over 1,800 club members and their friends attended the meetings. Six additional field days of a general nature were conducted by this Branch.

REPORT OF THE DAIRY COMMISSIONER

(J. R. SWEENEY)

From the view point of total production and improved price levels, the year 1937 was a favourable year for every branch of the dairy industry. Although there was a shortage of feed in a large area of the Province, and a decline in production was reported during the first six months of the year, it is possible to report an all-time record in creamery butter production, a 26.6% increase in the output of cheese and a total value of all dairy production amounting to \$17,137,900, compared with a value of \$15,505,800 in 1936.

A summary of production and values is presented in the following statement:

QUANTITIES AND VALUES OF DAIRY PRODUCTS
(1937—Final)

	Pounds	Price	Total Value
Creamery Butter	26,323,562	\$.245	\$ 6,449,273
Farm Dairy Butter	15,600,000	.195	3,042,000
Factory Cheese	1,838,589	.146	268,434
Farm Dairy Cheese	225,000	.130	29,250
Ice Cream (gallons)	524,048	1.186	621,564
Milk, Cream and Evaporated, consumed, fed to animals, or otherwise utilized			6,727,379
Total			\$17,137,900

(1936—Final)

	Pounds	Price	Total Value
Creamery Butter	25,491,105	\$.216	\$ 5,501,767
Farm Dairy Butter	13,000,000	.160	2,080,000
Factory Cheese	1,451,735	.130	190,469
Farm Dairy Cheese	225,000	.110	24,750
Ice Cream (gallons)	497,101	1.150	570,791
Milk, Cream and Evaporated, consumed, fed to animals, or otherwise utilized			7,138,023
Total			\$15,505,800

DAIRY DEVELOPMENT.

In reviewing the dairy situation in the Province, it is apparent that dairying is making substantial gains in central and northern Alberta, while the unfavourable conditions in the southern section account for a decrease of 10.7% in production in the area south of a line drawn across the Province at Bowden.

Drouth conditions have caused a natural zoning of the Province, according to areas where the feed supply is doubtful, and areas where mixed farming and live stock are receiving greater attention. An increased acreage of fodder crops, particularly legumes, are indications of a change in the methods of farming pursued by many farmers in central and northern Alberta. If these fodder and pasture crops are to be marketed to the best advantage on the farms, there should be an increase in the number of cows kept and further increases in dairy production. The extent to which dairying may develop in this Province will depend on the price levels of dairy products in comparison with those of other agricul-

tural commodities. At the present time, the improvement in the prices of dairy products is stimulating the production, and the returns to producers have gradually returned normal values.

CREAMERIES.

There were 96 creameries in operation during the year. No new creameries were established and the average output per plant was 275,000 pounds.

This average output is much below the desired volume for economical operation. However, many of the smaller creameries provide market facilities in the pioneer districts and it is expected that production will increase in these areas.

CREAM GRADING.

A gradual improvement in the quality of cream delivered to the creameries, is indicated by the following statement:

AVERAGE TESTS AND GRADES OF CREAM.

	1937.		1936.		1935.	
	Pounds.	%	Pounds.	%	Pounds.	%
Cream Received	66,221,560		64,330,141		57,777,305	
Average Test		(34.0)		(33.8)		(33.9)
Butter Fat—						
Table Grade	575,332	(2.5)	608,093	(2.8)	574,826	(2.9)
Special Grade	14,658,133	(65.1)	13,939,307	(64.1)	11,991,878	(61.3)
First Grade	6,514,229	(28.9)	6,461,749	(29.7)	6,123,768	(31.3)
Second Grade	712,267	(3.2)	688,469	(3.2)	837,609	(4.3)
Off Grade	61,070	(.3)	43,087	(.2)	33,237	(.2)
Total	22,521,031	(100.0)	21,740,705	(100.0)	19,561,318	(100.0)

An effort has been made to educate the producers to market sweet cream and obtain the premiums guaranteed under The Dairymen's Act and Regulations. Licensed graders have co-operated with this branch in the campaign to reduce the amount of low grade cream delivered to the creameries and it is encouraging to report that producers have responded well and are providing cooling facilities to assist in the proper care of cream on the farm.

The cream grading standards have been rigidly enforced during the year. Inspectors of this branch have made 2,471 visits to plants, graded 89,001 cans of cream and made 31,610 butterfat tests. There has been an improvement in the methods of sampling milk and cream and in the testing technique.

BUTTER GRADING.

Butter grading is a function of the Dominion Department of Agriculture and the following statement shows the butter grading report for 1937 and a comparison with previous years.

STATEMENT OF CREAMERY BUTTER GRADED (PASTEURIZED) FEDERAL REPORT (56-pound boxes and samples.)

Year	Total Pounds graded	First Grade	Second Grade	Third Grade	No Grade
1933	19,310,427	78.0	15.6	5.9	.5
1934	20,787,628	76.3	17.1	6.0	.6
1935	19,081,270	83.0	10.5	6.0	.5
1936	21,584,080	87.4	7.4	4.4	.8
1937	23,553,880	87.0	7.4	4.5	1.1

It has been the object of this branch to improve the quality of creamery butter and eliminate the defects which may be under the buttermaker's control. Car lots of Alberta butter containing at least 50% of 93 score butter are highly regarded by the larger buyers and Alberta's record of 59.3% of 93 score quality has greatly assisted in marketing the surplus output at satisfactory prices.

BUTTER COMPETITIONS

The buttermakers have been encouraged to exhibit at the large Canadian Exhibitions and the results have been gratifying. At Vancouver, Calgary, Edmonton, Saskatoon, Regina, Brandon, Toronto National, Ottawa, London and the Royal Winter Fair, Toronto, Alberta butter was awarded 1,035 prizes representing 49% of the total prizes and 44.4% of all the First prizes awarded.

' In co-operation with the Buttermakers' Section of the Alberta Dairy-men's Association, a large number of competitions are arranged annually and much interest is taken in these contests. The instruction imparted through butter competitions has been the means of obtaining greater uniformity in the type of butter manufactured.

DAIRY BRANCH LABORATORY.

The laboratory continues to serve the industry in checking the purity of water supplies; dealing with analytical and research problems and making mould and yeast counts of creamery butter. It is interesting to report that an increasing number of creameries made use of the laboratory facilities and the mould and yeast counts reached the lowest average on record. The number of samples grading "Excellent" reached the highest percentage yet attained in the Province. A number of plant surveys were conducted and an increasing number of Exhibition and Convention samples were checked.

INSTRUCTIONAL WORK.

This branch, in co-operation with the Department of Dairying at the University, conducted a Creamery Short Course of four weeks' duration in the month of March which was attended by twenty-one students. The Course is offered to young men employed in creameries and only a limited number can be accommodated.

CREAMERY BEAUTIFICATION.

A creamery beautification competition was inaugurated during the year for the purpose of directing greater attention to the beautification of creamery surroundings. The nurserymen of the Province co-operated in this project by donating shrubs and nursery stock as prizes in support of the contest. As a result of the interest created by this competition, there has been a great deal of landscaping and preparatory work done in readiness for spring planting and it is expected that creamery grounds and surroundings will be made more attractive.

CHEESE.

There were 14 cheese factories operated in the Province during the season and the total output was 1,838,589 pounds.

The Woodland Dairy, Limited, opened a cheese factory at Ryley in premises which had formerly been used as a creamery and Burns & Company, Limited, commenced the manufacture of cheese at Camrose.

The quality of Alberta cheese showed much improvement compared with previous years and a large proportion of the output was tendered for grading and received the official federal grade marks.

Alberta cheese has increased in volume to meet the growing demand of the retail trade within the Province. A large amount is sold in the form of mild cheddar, and small sizes, while there is, also, an increasing proportion of the make stored to supply the demand for matured cheese. If the quality of milk delivered to the cheese factories can be further improved, there is little doubt that Alberta made cheese will gradually replace much of the cheddar type now obtained from outside the Province.

HERD TESTING WORK.

The modified Cow Testing Service offered to herd owners was continued during the year and until funds are made available, it will not be possible to develop a wider interest in herd improvement work.

REVENUES.

Revenues from creamery and cheese factory licenses amounted to \$565; Graders' and testers' license fees, \$460; and, herd testing fees collected, \$74; a total revenue of \$1,099.

As in former years, the surplus from the cream grading trust account was refunded to the creamery operators. Collections were satisfactory and ample reserves for uncollectable accounts have been established.

RECOMMENDATIONS.

There is a demand from producers for herd improvement work and studies in milk and butterfat production costs. It would greatly assist in improving dairy herds if attention could be given to these production problems.

STAFF.

There were no changes in the personnel of the staff during the year. John Keay, Dairy Inspector, was given leave of absence for the purpose of studying dairying in New Zealand and Australia and will return to his duties early in the new year.

DATA.

Following are a number of Tables which set forth the details of estimated dairy production for 1937, and statistical information concerning dairying in former years:

DEPARTMENT OF AGRICULTURE

**MONTHLY AVERAGE NET PRICES PAID BY CREAMERIES IN ALBERTA
PER POUND OF BUTTER FAT IN "SPECIAL GRADE" CREAM,
F.O.B. SHIPPING POINT, FOR FOUR YEARS**

	1937		1936		1935		1934	
	F.O.B.		F.O.B.		F.O.B.		F.O.B.	
	Cents	%	Cents	%	Cents	%	Cents	%
January	22.3	(3.8)	21.0	(4.6)	18.3	(4.6)	21.25	(4.7)
February	22.0	(3.8)	20.4	(4.5)	21.3	(5.0)	22.65	(5.2)
March	22.4	(3.8)	18.5	(4.7)	20.5	(5.3)	26.85	(5.9)
April	25.3	(4.4)	18.0	(5.5)	19.5	(5.7)	28.65	(7.4)
May	22.0	(8.1)	17.9	(8.5)	19.7	(7.7)	16.25	(11.5)
June	22.6	(14.5)	17.3	(14.9)	16.5	(15.3)	14.15	(16.6)
July	23.2	(15.4)	19.2	(15.3)	15.5	(16.1)	12.65	(16.1)
August	23.9	(15.3)	20.8	(13.2)	15.5	(14.3)	12.65	(12.0)
September	23.0	(11.8)	22.0	(11.0)	16.3	(10.2)	13.15	(7.8)
October	23.3	(8.6)	23.4	(8.5)	18.9	(6.4)	13.65	(5.1)
November	25.7	(6.1)	21.0	(5.2)	21.0	(4.7)	14.65	(3.9)
December	25.7	(4.4)	21.0	(4.1)	21.5	(4.7)	15.65	(3.8)
The Year	23.34	(100.0)	19.89	(100.0)	18.01	(100.0)	17.10	(100.0)

NOTE: The figures inclosed in brackets represent the monthly percentages of the cream receipts for the year.

CREAM BUTTER PRODUCTION

Year	Creameries	Pounds Butter	Selling Value	
			Total	Cents per Pound
1920	53	11,821,291	\$6,555,509	(55.45)
1925	99	19,630,101	6,959,059	(35.45)
1930	92	17,716,744	4,968,227	(28.04)
1931	93	22,957,922	4,711,231	(20.52)
1932	95	21,016,048	3,512,685	(16.71)
1933	96	23,852,350	4,308,962	(18.10)
1934	96	25,601,447	4,830,793	(18.80)
1935	97	23,094,707	4,588,917	(19.90)
1936	96	25,491,105	5,501,767	(21.60)
1937	96	26,323,562	6,449,273	(24.50)

FACTORY CHEESE PRODUCTION

Year	Factories	Pounds Cheese	Selling Value	
			Total	Cents per Pound
1920	7	398,750	\$110,355	(27.70)
1925	14	1,473,835	306,604	(20.80)
1930	8	1,035,352	175,392	(16.94)
1931	10	1,040,588	118,390	(11.38)
1932	12	1,439,715	146,177	(10.15)
1933	11	1,437,387	149,593	(10.40)
1934	11	1,370,425	154,138	(11.20)
1935	11	1,364,526	168,280	(12.33)
1936	12	1,451,735	190,469	(13.00)
1937	14	1,838,589	268,434	(14.60)

TOTAL ANNUAL VALUE OF DAIRY PRODUCTS

1900	\$ 546,476	1932	\$11,850,000
1910	7,855,761	1933	12,950,000
1915	15,896,586	1934	14,391,204
1920	34,000,000	1935	14,252,500
1925	23,002,000	1936	15,505,800
1930	18,675,500	1937	17,137,900
1931	15,750,000		

MILCH COWS

Year	Cows	Year	Cows
1901	46,101	1932	424,000
1906	101,235	1933	406,520
1911	147,687	1934	461,700
1916	277,324	1935	464,200
1921	432,838	1936	458,200
1926	436,500	1937	453,600
1931	385,000		

REPORT OF THE LIVE STOCK BRANCH

One of the most outstanding industries of this Province, is that of live stock, which will be readily seen by the following figures. The total approximate population of cattle in the Province of Alberta, for 1937, was 1,536,200 head and the total approximate value, \$29,246,000. There has been a decided increase in the number of live stock exported from Alberta for 1937, when one considers that approximately \$10,000,000 worth of horses, cattle, sheep and swine, passed through the Edmonton and Calgary Stockyards. With these figures in mind, it is quite evident that a large percentage of the population of the Province must therefore be engaged in this industry.

However, this does not mean that the live stock industry is progressing satisfactorily on a profitable basis for the cattlemen. Notwithstanding the extreme drouth conditions prevailing in the South Eastern and Central parts of Alberta, there was an abundance of feed in the Northern part of the Province and the feed prices held very steady and had a tendency to be higher than those of last year.

HORSES.

Interest in the breeding of draft horses has increased during the past three years. Horses are still the main source of power on farms of average size. In fact, many large farms which operated under tractor power for many years past, have gone back to using horses for all farm work.

It is interesting to note that during the past year, horse buyers from Eastern Canada and elsewhere, have been going through districts in Central and Northern Alberta, especially, in the search for the class of animal that they require, and are insisting upon well broken animals of good type and conformation. Unbroken range horses are not desired, for the animals they purchase, are required to go immediately to the small farmers who have not the time or inclination to handle the range horse. Judging by enquiries reaching this Department, it would appear as if the farmers are realizing the importance of having a few good, well broken horses for sale each year, and are appreciating the fact that considerable revenue can be derived from this source.

It is stated by some, that the absence of a steady market for good horses, at profitable prices, is discouraging many farmers from raising horses. This is probably true as regards the breeding of big, heavy, drafters, but the demand these days appears to be for a horse of medium weight, and for this class a brisk and steady market exists. There are many enquiries for draft stallions of the various breeds, and the popular demand is for animals not too heavy, and they must be deep-bodied, have good bone and sound feet, and free from vice.

Conditions regarding stallions have changed greatly during the past two years. Those owned by private individuals and travelled in various districts are gradually disappearing, and in their places are stallions

owned by a group of farmers who own the animals jointly. This system of co-operative breeding is meeting with marked success and it is leading to new ideas regarding horse breeding generally. It is our opinion that the ultimate outcome will be a remarkable improvement after a time, in the horses in Alberta.

Climatic conditions have brought about many changes in the horse industry. Many, who some years ago were growing grain almost exclusively, are now endeavouring to get back into horse breeding, and there is every hope that their endeavours will be crowned with success. We have districts in the province that are particularly suitable for horse breeding, and it is regrettable that for some years the interest in this important industry subsided, but the conditions in these communities are rapidly changing and within a few years we are satisfied that from these districts will come horses of as high a standard as were obtainable there in years past.

Due to the increased interest in horse breeding, a considerable number of draft stallions were imported into the Province during last year. The men interested in this enterprise were individuals of excellent reputation and were well qualified to select animals of high quality. Particular attention was given to soundness of pedigree, as well as to the type of stallion best suited to our needs. The results from the distribution of these stallions should contribute greatly to the improvement of our horses.

Some years ago a group of horsemen in the Lacombe district undertook to establish an annual horse sale at Lacombe. It has now developed into one of the largest auction sales of its kind in Canada. For this reason it deserves special attention in this report. Contributions are made from many points throughout Central and Northern Alberta, and it has now developed into a central selling place where buyers from Eastern and Western Canada and from the United States meet each year.

The horses sold are practically all of the draft breeds, and the management are insistent that the horses must be of good quality and in good flesh, as they realize the importance of having horses fitted properly in order to bring top prices.

Such a sale has its educational advantages, and is having the effect of placing a large number of horses on the market at one time and at one central point, all in marketable condition.

The following is a report of the Lacombe Horse Sale from 1930 to 1937, with the number of horses sold, amount of money paid and the average price of each:

LACOMBE HORSE SALE

Year	No. Sold	Amount Paid	Average per Head
1930	357	\$16,569.86	\$46.55
1931	605	33,465.00	55.31
1932	376	22,967.50	61.08
1933	187	10,328.00	55.23
1934	203	13,764.50	67.80
1935	366	25,110.50	68.60
1936	308	25,830.25	83.86
1937	540	50,712.00	93.91

Light horse breeding is still popular in Alberta and we have a number of very high class thoroughbred stallions in this Province, not only operating under the Dominion Government Bonusing Policy, but privately owned

as well. At both Calgary and Edmonton Shows, the classes of light and heavy weight hunters are well filled and competition is keen. There is a large demand from outside the Province for hunter horses of the right type, and several have been shipped to the United States at very high prices.

EXPORT OF HORSES FROM ALBERTA—1937

To British Columbia	2,082	To Nova Scotia	942
To Saskatchewan	1,509	To New Brunswick	1,353
To Manitoba	628	To Prince Ed. Island	204
To Ontario	2,625	To Newfoundland	23
To Quebec	10,698	To U.S.A.	990
Total head exported			21,052

CATTLE

The year 1937 opened with the prospects of being a profitable one for those who winter-fed cattle for the spring markets. Prices held very steady during the month of January, and from then on there was a gradual rise and a continuous strengthening until about the first week in October.

From the opening of the year, until the close, conditions of the United States market dictated the movement of price structure in our own. Contrary to the usual trend, prices in the United States market moved steadily upwards on the winter finished cattle. This was extremely useful in the disposal of stock on feed. The ready removal of the surplus in the upper end of cattle quality, had a tonic effect on the market for the rank and file of beef making material; also it reflected considerable strength to the market for stockers and feeders, and as the year progressed, prices paid for suitable qualities reached rather high figures. The trend of the market during 1938, should show decreases in total market volume, which will reflect in good prices.

There is every reason to believe that the horse, cattle, sheep and swine outlook for the year 1938, should show some improvement over that of 1937, when one takes into consideration that twenty odd thousand cattle of the Canner type were shipped out of the Province during the year 1937-38, at the same time not forgetting that steps are being taken to eliminate scrub bulls and stallions by encouraging the securing of pure-bred sires. Greater attention is also being given by the District Agriculturists and other fieldmen of the Department to instruction in best methods of feeding and fitting stock of all classes.

The following figures, show the number of head of cattle shipped out of the Province, and their destinations, during the years 1936 and 1937:

	1936	1937
To British Columbia	84,831	71,066
To Saskatchewan	6,151	3,086
To Manitoba	53,184	33,288
To Ontario	14,162	49,795
To Quebec	45,191	24,628
To Nova Scotia	690	730
To New Brunswick	95	665
To Great Britain		32
To Prince Edward Island	108	33
To U. S. A.	81,785	75,205
Total	317,054	258,528

For the past few years, the pure-bred breeders have had difficulty staying in business, on account of the poor prices realized, but the year 1937 has been more profitable, due to the rise in the commercial market with a continued up-grade in 1938, and the pure-bred breeders should realize higher prices, thereby enabling them to dispose of their stock on a profitable basis. To illustrate this, the following is a list of the pure-bred bull sales, held in the Province during 1936 and 1937, showing the increase in returns:

EDMONTON BULL SALE

Breed	No. Sold	Average Price 1936	No. Sold	Average Price 1937
Shorthorns	70	\$ 80.61	50	\$106.90
Aberdeen Angus	15	63.33	9	106.11
Herefords	16	96.56	6	164.17
	101	\$ 84.41	65	\$112.07

CALGARY BULL SALE

Breed	No. Sold	Average Price 1936	No. Sold	Average Price 1937
Shorthorns	187	\$ 99.92	181	\$108.15
Aberdeen Angus	82	79.39	88	94.88
Herefords	285	156.19	253	156.11
	554	\$125.83	522	\$129.15

LACOMBE BULL SALE

Breed	No. Sold	Average Price 1936	No. Sold	Average Price 1937
Shorthorns	43	\$ 79.77	51	\$ 91.56
Aberdeen Angus	11	101.37	12	118.75
Herefords	26	88.27	27	154.81
	80	\$ 85.50	90	\$121.70

There were approximately 189,805 head of cattle passed through the Edmonton and Calgary Stockyards, at an estimated value of \$5,841,118.

During 1937, the number of cattle going to Edmonton packing plants was 44,233, while 61,116 head went to Calgary plants.

DAIRY CATTLE.

In the Province of Alberta we have some splendid herds of dairy cattle, both pure-bred and grade. This is particularly true in some of the fluid milk districts where good sires have been brought in, resulting in the herds being kept up, both as to type and production. It is interesting to note that each year there is a substantial increase in dairying and the farmers are at last realizing the advantage that is gained by paying attention to the breeding of their cattle. There are still, however, large numbers of farmers, especially in the districts outside the fluid milk areas, who need more encouragement and assistance in building up better herds.

DROUTH CATTLE

From the end of May, to the end of August, the drouth conditions in the South Eastern and Central parts of the Province became so severe, that it was necessary for the Government to give assistance to those farmers who were unfortunate enough to reside within this area.

During the months of June and July, the Minister of Agriculture, realizing that some assistance would be necessary to provide help in the

way of feed, instituted a policy for the movement of haying outfits from the drouth area to hay meadows. A considerable number of these outfits were shipped under this movement. When drouth conditions became more acute the Provincial and Dominion Governments instituted a joint drouth cattle movement policy, which enabled the farmer to be paid the full market price, less freight, on Butcher, Feeder and Canner cattle at point of shipment. Due to this policy, about 14,619 cattle were disposed of, bringing an average price of \$16.66, to the farmer. The Provincial Department of Agriculture were responsible for the administration of assembling and shipping.

A joint Dominion and Provincial policy was started on August 10th, which provided for free freight from the drouth area to winter feed, under conditions similar to those of 1936. This policy terminated on December 31st, 1937, and though the number of head moved was somewhat lower than in 1936, a larger number of farmers participated which is quite evident from the fact that maximum cars per farmer in 1937 was 4, as compared with 10 in 1936. Total number of cattle shipped out of the Province from within the drouth area under both the free freight and optional marketing policies was 21,470, which would otherwise have perished had no provisions been made to take care of them.

HOGS.

The hog industry still continues to be profitable on the mixed farms of Alberta. This is due partially to the excellent market services, but credit must also go to the producer for an exceptionally good showing in the production of British bacon, as our export of bacon and ham and other pork exceeded the total of the previous year by a substantial volume. There are, however, indications that during the Spring and Autumn of 1938, there will be a reduction, although it is not expected that the movement will be sharply lower in total all year.

The following figures will illustrate to some extent, the standing of the Province in hog production during 1937:

Below is a summary of the 1936 and 1937 Calgary and Edmonton Swine Sales:

EDMONTON SWINE SALE

Breed	No. Sold	Average Price	No. Sold	Average Price
		1936		1937
Yorkshire Sows	37	\$ 23.12	20	\$ 23.85
Tamworth Sows	8	25.78	9	25.44
Yorkshire Boars	34	20.94	42	28.34
Tamworth Boars			4	21.75
	79	\$ 22.65	75	\$ 26.44

CALGARY SWINE SALE

Breed	No. Sold	Average Price	No. Sold	Average Price
		1936		1937
Tamworth Sows	7	\$ 11.43		\$
Yorkshire Sows	33	25.48	26	28.62
Berkshire Sows			2	21.50
Tamworth Boars	9	18.00	4	31.50
Berkshire Boars	1	10.00		
Yorkshire Boars	53	23.94	44	25.16
	103	\$ 22.93	76	\$ 26.58

Sheep.—For a number of years now, Alberta Sheep Breeders have been in a fortunate position so far as the markets are concerned, owing to the domestic trade in Canada absorbing the Canadian production, leaving no surplus to depress the market. However, this cannot be said of the Fall of 1937, due to the lowering of the tariff on lambs imported from New Zealand and Australia, which for the past two or three years has been 3c per pound, but on October 1st, 1937, was reduced to ½c per pound.

This may also be said in the case of lambs shipped alive to the United States, on which the tariff rate was \$3.00 per head. It should be remembered that when Canada imports dressed lambs from the United States, there is a tariff rate of only 6c per pound, as against a 7c rate on Canadian lambs exported into the United States. This applies equally to the Argentine. There is no doubt that this has a serious effect on lamb feeders in this Province. It is encouraging to note however that the sheep and lamb returns for 1937 have shown a slight up-trend to those of previous years.

Below is a summary of the 1936 and 1937 Sheep Sales held in the Province:—

EDMONTON SHEEP SALE

Breed	No. Sold	Average Price	No. Sold	Average Price
		1936		1937
Suffolk Ewes	12	\$ 5.58	10	\$ 16.20
Oxford Ewes	2	6.00	6	6.50
Southdown Rams	8	20.38	6	21.33
Suffolk Rams	37	23.25	39	24.62
Cheviot Rams	9	14.11	1	21.00
Hampshire Rams	17	17.88	11	26.36
Oxford Rams	21	15.29	38	20.15
Shropshire Rams	9	15.78	7	20.43
	115	\$ 14.78	118	\$ 21.26

CALGARY SHEEP SALE

Breed	No. Sold	Average Price	No. Sold	Average Price
		1936		1937
Suffolk Ewes	43	\$ 9.81	14	\$ 13.14
Hampshire Ewes	30	13.42	80	15.65
Shropshire Ewes	9	8.44	6	17.67
Cheviot Ewes	1	6.00		
Southdown Ewes	10	12.60	18	18.28
	93	\$ 11.10	118	\$ 16.18
Grade Ewes	165	\$ 3.37	172	\$ 5.18
Rambouillet Rams			12	21.66
Suffolk Rams	101	18.60	53	15.60
Hampshire Rams	114	31.28	144	24.69
Oxford Rams	1	30.00		
Shropshire Rams	18	19.78	12	21.75
Cheviot Rams	5	14.00	1	20.00
Southdown Rams	15	15.60	19	18.21
	254	\$ 24.15	531	\$ 15.12

LACOMBE SHEEP SALE

Breed	No. Sold	Average Price	No. Sold	Average Price
		1936		1937
Grade Ewes	176	\$ 3.25	169	\$ 3.45
Pure-Bred Ewes	66	8.05	21	7.52
Pure-Bred Rams	62	18.80	62	15.25
	304	\$ 10.03	252	\$ 8.74

During the year 460 new Horse Brands, 510 new Cattle Brands, 69 Fox Brands and 1 Poultry Brand, were recorded to their respective owners,

while 94 Transfers were registered. Searches and strays numbered 2,271, and Renewals 2,568 (Cattle 1,648 and Horses 920), making a total of 5,973 transactions. Compared with 1936, these figures show an increase of 12 Horse Brands, 61 Fox Brands and 148 strays, and a decrease of 87 Cattle Brands, 1 Sheep Brand, 1 Poultry Brand, 2 Transfers and 331 Renewals.

The approximate number of Brands now in good standing, in our registers, are as follows:—

Horse Brands	6,145
Cattle Brands	11,200
Poultry Brands	12
Sheep Brands	6
Fox Brands	92
TOTAL	17,455

TORONTO ROYAL WINTER FAIR—1937.

At the 1937 Royal Winter Fair, the exhibitors from Alberta, again won outstanding honours by capturing more awards than they did in 1936. The Department of Agriculture made every effort to give the exhibitors every service and they must be commended for making a worthwhile contribution toward sound live stock development in our Province.

The Minister of Agriculture has recently formed a special swine committee to promote the exhibits of carload lots of swine for 1938. If the support now being received from the Swine Breeders continues, it augurs well for the results of this class of exhibit in 1938.

Summary of championship awards is as follows:—

Awards	Hohrses	Cattle	Sheep	Swine
Grand Championships	--	1	--	--
Reserve Grand Championships	--	8	--	--
Reserve Senior Championships	--	4	--	--
Championships	--	--	1	--
Junior Championships	--	3	--	--
Reserve Junior Championships	--	4	--	--
Specials	1	3	--	--
Grand Total of Championship awards, 24.				

Following is a summary of prizes:—

Awards	Horses	Cattle	Sheep	Swine
First Prize	3	28	1	1
Second Prize	9	32	11	2
Third Prize	7	20	2	1
Fourth Prize	9	17	2	2
Fifth Prize	3	10	2	1
Sixth Prize	1	7	2	--
Seventh Prize	8	3	--	--
Eighth Prize	9	--	--	1
Ninth Prize	1	2	--	--
Tenth Prize	--	1	--	1

Total of live stock prizes awarded to Alberta, 199.

REPORT OF THE POULTRY COMMISSIONER.

(C. W. TRAVES.)

The Poultry population for Alberta at the end of 1937 is approximately the same as for 1936. Due to the fairly high prices for eggs and poultry meat continuing for 1936, contrary to general belief there was an increase in the quantity of chicks hatched in 1937 in the Province. Total sales from Alberta hatcheries showed an increase of approximately forty thousand, while custom hatching from non-approved flocks, showed an increase of six thousand chicks. In addition to the local sales and hatches, outside points, especially British Columbia, reported record sales of chicks to Alberta poultrymen. Indications are for an increase in this phase of the poultry industry. Alberta hatcherymen are in some instances planning on increasing their capacity, while reports from British Columbia are to the effect that they are expecting record sales of chicks this coming season. A careful survey of the situation shows the necessity of paying particular attention to the production of hatching eggs and the sale of chicks.

Dealing with the production of hatching eggs this Department is becoming increasingly severe in the selection of the flocks to be approved and blood tested. Also we are being more severe in the selection of the birds to be used as breeders in these flocks. This is absolutely necessary if the Alberta flocks are to be kept to the standard of quality necessary for successful competition with outside points. Another way in which this desired quality can be materially assisted is in the selection of the highest quality of male birds especially. In this regard it is the intention to very shortly insist on the use of Record of Performance males from hens only. The use of males from pullets will not be countenanced. Also we intend to insist on the use of hens only as breeders. Such a selection will materially advance and maintain the quality of the chicks being produced in Alberta, but in order to attain this standard it will be necessary for those breeders carrying out this programme to receive their fair share from the sale of the chicks. It is apparent that they and the hatcherymen of Alberta are working not only in the interests of better chicks, but in the solution of the problem of financing this aim.

During 1937 the hatching egg shippers formed their own organization. Also the hatcherymen, members of the Northern and Southern Alberta Associations, proposed uniting into one organization. In November of this year the executives of these Associations met at Red Deer and thoroughly discussed the whole question of the hatching egg and day-old chick business. The harmony and evident desire to work together, and with the Department of Agriculture, for the production of quality hatching eggs and chicks, and the sale of these at a reasonable and yet profitable price level was very encouraging. It was agreed that the fairest paying price to the egg shippers was the 50-50 basis on the advertised price of chicks per 100 on the day the eggs hatched. In order to maintain the prices of chicks at a remunerative level, especially in view of the fact that some outside points are using Alberta as a dumping ground for their surplus,

and are allowing commissions in excess of what could be legitimately allowed according to the paying prices for hatching eggs and the sale prices of the chicks, the Alberta shippers and hatcherymen are preparing a Brief, asking for a full investigation into the whole situation. They believe that all hatcheries and chick agents and sub-agents in Alberta should be licensed and controlled if unfair trade practices are being employed.

EGG AND POULTRY MEAT MARKETS.

As stated above the prices for eggs and poultry meat were approximately the same as for 1936. However, the producers feel that they are not receiving sufficient for their production when the paying prices by the consumers are taken into consideration. There is an ever increasing flow of letters being received as well as visitors to the office on this one point. Certainly the spreads as advertised in the daily press and in the Dominion Weekly Egg and Poultry Market Report give them every justification for complaint. It is very noticeable that throughout the year, even where there is not the slightest possibility of Alberta eggs being shipped to the eastern markets, due to a shortage of fresh eggs to fill the local demand, the spreads paid to the eastern producers and Alberta producers are religiously maintained. Also when the producers are barely making a profit above cost of production, they are asking why it is necessary for those handling the eggs to show a spread between their paying prices and selling prices to the consumers of over 50% in many instances. For example, the average paying price for Grade A Large during December to the producers was 26c, while the average price to the consumer was 41c per dozen. The average paying price for turkeys, Grade A, was 19c per pound, while the average selling price as advertised was 32c per pound.

During the early part of the year a considerable amount of market investigation work was carried out, and it is hoped that the coming year will see this work carried through to completion and a system of more orderly marketing of eggs and poultry meat become an established fact. It is felt in many quarters that a First Receivers' licensing addition to the present regulations is necessary. Others feel that all dealers, wholesale as well as retail, should be licensed, and that peddling from door to door should be either strictly supervised or entirely prohibited. The executive of the Alberta Poultry Federation, or the Alberta Poultry Council as it is called, is fairly representative of the industry, especially the production end. It is desirable that the legitimate wholesalers and retailers of eggs and poultry will organize and become affiliated with the Alberta Poultry Federation and have representation on the Poultry Council. They are a necessary part of the industry and should have a say in the abolishing of unethical practices as well as in the general advancement of the industry. Poultry could play a greatly increased part in the re-establishing of the drought areas as well as showing a marked general increase throughout the Province, but this cannot be hoped for until it is on a more remunerative basis, especially to the producers.

POULTRY PROMOTION PROJECTS.

This year the Alberta Winter-Tested Flocks were discontinued, partly due to lack of funds to efficiently carry out inspection of these flocks.

Under the revised policy for poultry it is hoped to encourage the breeding and sale of R.O.P. stock so that not only the present poultrymen engaged in this work but other good breeders will find it to their advantage to engage in this very necessary branch of poultry improvement. The winter-test cannot be termed as breeding in the true sense of the word. Rather it is flock improvement at best.

Turkey banding, Accredited Flocks Associations, and flock approval and blood testing for Pullorum disease are about on a par with last year. Several new applications for various groups have been received, but expansion cannot be expected on any considerable scale until the producers in the various phases of the industry are receiving a more remunerative share of the consumer prices paid for the products of their industry.

ROYAL SHOW, TORONTO.

The usual complement of 60 birds went to the Royal Show at Toronto, and as in previous years made a very creditable showing taking the following prizes: 16 Firsts, 10 Seconds, 11 Thirds, 7 other prizes, 1 Grand Championship, 2 Reserve Grand Championships, a total of 47 prizes in all. The breeders contributing the exhibit were:—

Turkeys.—Mrs. John Bird; Mrs. C. J. Hall; Manuel Brothers; Mrs. O. Mickelson; W. J. Pickard; Miss Elsie Richards; Mrs. N. M. Robinson; Alberta Department of Agriculture.

Poultry.—John C. Bird; H. A. Cyster; H. Gallagher; George Hurst; William Millar; James Reid; James S. Smith; N. S. Thompson; F. S. Wetherall; Mrs. J. E. Wilkinson; Gilbert Young.

With the World's Poultry Congress being held at Cleveland, Ohio, during August, 1939, the Alberta exhibitors are already preparing for this premier poultry event. It is desirable that this Government offer extra financial assistance to the Alberta breeders with a view of obtaining an exhibit for the Congress equal to any other province or country. Over fifty nations will be represented and Alberta cannot afford to miss this golden opportunity to show the world that her poultry industry is second to none. The publicity and orders that will be the result of a first-class showing will be of the greatest benefit, not only to the individual breeders, but to the Province as a whole.

PROVINCIAL POULTRY PLANT.

The Provincial Poultry Plant at Oliver will in future be conducted as a source of progeny tested foundation and flock improvement stock for the better class poultry breeders. The Plant will be conducted more as an experimental and research station where definite experiments of a scientific and practical nature will be conducted in order to assist in raising the industry to its highest possible standard. This work will be carried out with turkeys as well as with the most prominent breeds of poultry. With an industry having an estimated value of ten millions of dollars, it is of the utmost importance that those engaged in it are kept posted as to the latest developments, and have a dependable place where their difficulties can be scientifically solved.

REPORT OF FISH AND GAME COMMISSIONER.

(W. H. WALLACE.)

I have pleasure in submitting herewith the Annual Report of the Game and Fisheries Branch, giving the history of the respective activities in a short, concise form.

Public interest is increasing tremendously year by year and it is with profound sincerity I express my gratitude for the constructive criticism and assistance received from citizens in all walks of life, particularly from the many Fish and Game organizations, members of the Royal Canadian Mounted Police, Honorary Game Guardians, the Fur Trade, and others vitally interested in Game, Fish and Fur.

Greater efforts are evidenced yearly to secure the utmost protection compatible with good management, and in this regard bounties have been increased on such predators as Timber Wolves, which are undoubtedly a serious menace in many districts, throughout the Province.

Further this Province has become the mecca of a large number of non-resident sportsmen because of the variety of big game found therein, and the ease by which the hunting areas may be entered.

MIGRATORY GAME BIRDS.

Reports would indicate that Ducks, especially the surface feeding and diving Ducks, have been greatly reduced in numbers over a period of years, due primarily to dry seasons, and the consequent disappearance of many hitherto favourable breeding places.

It is with pleasure I record the excellent work of the Inglewood Bird Sanctuary situated within the borders of the City of Calgary. Large numbers of migratory birds yearly frequent this Sanctuary; their condition is excellent, and much praise is due the management and caretaker for the admirable way these visitors are fed and looked after.

Upland Game Birds.—The very severe weather conditions prevailing in Southern Alberta during the 1936-1937 period contributed to a large mortality in the Hungarian Grey Partridge. This in addition to two bad hatching spring seasons, as well as the unnatural increase of predatory birds has created a very unbalanced condition.

The same condition is also true of our Ruffed Grouse, Sharp-tailed and Pinnated Grouse, and complete close seasons were enforced on both these excellent indigenous upland Game Birds. Reports indicate that Prairie Chickens are to be found in fair numbers in favourite haunts.

The report in connection with fishing activities follows that of the Game branch and will indicate briefly some phases of this work. A full report in connection with both Game and Fish will be separately printed and made available to interested parties.

Fur Producing Animals.—The total number of animals taken during the fur year extending from July 1, 1936, to June 30, 1937, amounted to 2,068,118, which is an increase of about eight hundred thousand. The average values were a little higher than the previous year so that the

total revenue derived from the sale of furs approached two million, two hundred thousand dollars.

During the last year there has been an entire close season on beaver throughout the Province with special permits issued in the southern part of the Province where damage was being done by these animals. The close season on muskrat South of the North Saskatchewan River is also being continued, with special permits in the regular way.

MUSKRAT AND BEAVER PERMITS ISSUED.

1936-1937.

Muskrat permits issued	416
Muskrafs reported taken	5891
Beaver permits issued	28
Beaver reported taken	117

Fur Farming.—The fur farm industry has reached quite large proportions in Alberta, there being 697 licensed farms on which there was reported to be 64,217 animals, valued at \$1,158,550.75 on a pelt valuation. There were pelted on these farms during the past year, 28,750, having a pelt valuation of \$581,778.05. In point of numbers and value fox leads, followed by mink and muskrats. There is an increasing interest in this industry and the quality of the animals kept is steadily improving. As there is a world market for fox and mink pelts which is likely to continue and increase, the outlook for those engaged in fur farming is very bright.

Destruction of Crows, Magpies and Gophers.—An increasing interest is being maintained in the destruction of these pests. The Fish and Game Protective Associations have co-operated and in many cases have given bounties and prizes in addition to the prizes awarded from this Competition. It has been proven by competent observers that the crows destroy about one-third of the nests of the hatching migratory waterfowl. Satisfactory numbers of Magpie eggs have also been taken in the Competition. The result of the Competition shows as follows:—

Crows and Magpies	26,595
Gophers	461,266
Crows and Magpies eggs	144,304
Total destroyed by School Children—	
Crows and Magpies	20,834
Gophers	338,139
Crows and Magpies eggs	126,710
Total destroyed by Adults—	
Crows and Magpies	5,761
Gophers	123,127
Crows and Magpies' eggs	17,594

FISHERIES REPORT.

It is with pleasure I append my report covering the commercial and Game fish operations for the period under review.

Commercial fishing enjoyed a profitable year with increased production as well as an increase in values both to fishermen and operators. Total production of commercial fish during the period under review namely April 1st, 1936, to March 31st, 1937, amounted to the following:—

6,029,857 pounds.

an increase of 1,108,315 pounds and value to fishermen and value as marketed as follows:—

Value to fishermen	\$ 252,773.00
Value as marketed	385,364.00

an increase in value to fishermen of \$52,379.00 and as marketed of \$97,638.00.

Domestic Fishing.—Which provides fishing for family use only, or by the Indian population was steady in production, the number of licenses and permits varies but little from year to year.

Sport and Game Fish Fishing.—Can be considered as only fair, due primarily to low water conditions. It is gratifying, however, to report that losses due to this latter condition were kept to a minimum during the winter, and it may be said that spring conditions were most favourable.

Commercial Fishing.—The period under review exhibits a total catch as previously stated of 6,029,857 an increase over the previous year of 1,108,315 pounds or over the two-year period of 1,970,421 pounds a record of nearly two million pounds increase in two years. Value of the year's catch to fishermen was \$252,773.00 an increase of \$52,379.00 or on the two-year period of \$104,583.00 and to the operators or as marketed, the value indicated was \$385,364.00 an increase of \$97,638.00 and for the two-year period an increase of \$141,293.00. Marketed value includes the cost of boxes, icing, handling, overhead and commission, all of which are, of course, important wage items. Due to light snowfalls during the winter season, there was little difficulty in marketing the fish caught from the nearer lakes in a fresh state and in consequence very little frozen fish was offered for sale.

Equipment.—Little new equipment was purchased, excepting at Lake Wabamun and Lac la Biche. The stress of economic conditions still prevails and most fishermen are content to carry on with mended nets or old ones.

Markets.—Market conditions during the summer and early December periods were poor to fair, good return being reported only for the period January to March. Some operators record losses on some consignments to New York, due to the failure of business firms in that metropolis.

It is considered desirable to protect the fishing interests of this Province by co-operation with the Dominion Government in safeguarding the interests of fishermen to a greater degree, in so far as the export market is concerned, and in this connection much valued support is obtained through the efforts of the Intelligence Branch of Department of Commerce at Ottawa. The mild weather contributed in placing the fisheries product on the market in excellent condition as a whole, and no difficulty was obtained in the peddling of fish for local markets throughout the entire period.

Domestic Fishing.—The total amount produced under domestic fishing for the year ending March 31st, 1937, was 555,500 pounds with an estimated value of \$33,330. The number of licenses issued were 489, or a decrease of 133.

Indian Fishing.—Fishing permits issued to Indians during the period totalled 861, an increase of 60. The estimated quantity of fish caught amounted to 861,000 pounds with an estimated value of \$51,660. This indicates an increase of 26,350 pounds, and in value of \$8,689.

LICENSES AND PERMITS ISSUED.

Domestic Licenses	489
Fishermens and Commercial	2392
Angling permits (Fisheries)	4634
Angling permits (Forestry)	156
Indian permits	861
Boat Licenses	25
TOTAL	8,557

an increase over the previous year of 438.

Angling.—Reports indicate good fishing for trout prevailed in the Bow and Elbow, as well as the Macleod River near Edson, and fair to good fishing in the famous Highwood River. Good fishing also was obtainable at Cold Lake. Fishing for the coarser varieties in Lakes north of Red Deer was immensely popular with excellent catches reported in most of the lakes fished. To better conditions and to give increased returns the Department introduced such species as the Loch Leven and Speckled trout into the waters of the Red Deer watershed and reports indicate that these are now rapidly increasing and offer good returns for the keen angler.

Fish caught by angling is estimated as follows:

Trout	246,000 lbs.
Rocky Mountain Whitefish	112,000 lbs.
Arctic Grayling	72,000 lbs.
Goldeye	7,300 lbs.
Pickrel	79,800 lbs.
Perch	235,000 lbs.
Pike	553,000 lbs.
TOTAL	1,305,100 lbs.

a net increase of 76,437 pounds. The total value is estimated at \$67,728 a slight increase over the value of the fish caught by angling for 1935 of \$66.00.

Observance of the Regulations.—Throughout the period under review prosecutions numbered 95, an increase of 25, and confiscations of illegal apparatus totalled 146, an increase of 20. Over four miles of nets were confiscated at Lake Wabamun alone. The enforcement of regulations were forcefully undertaken throughout the entire Province.

Fish Culture.—Details of the distribution from the various hatcheries into waters outside the National Parks are as follows:—

LESSER SLAVE LAKE.

Eyed eggs planted in Lac la Biche	10,000,000
Eyed eggs planted in Muriel Lake	5,000,000
	15,000,000
Fry planted in Lesser Slave Lake	88,669,750
	103,669,750

GAME FISH FRY AND FINGERLINGS.

Rainbow Fry and Fingerlings	1,377,785
Cutthroat Fry and Fingerlings	654,955
Kamloops Fry and Fingerlings	95,590
Brown Fry and Fingerlings	446,510
TOTAL	2,574,840

General.—The year under review has seen more effective control of the various problems appertaining to better conditions both commercially and from a sport fish point of view. The general public, co-operative associations, fish and game protective leagues and commercial operators evinced greater concern in the administration of the fisheries and improvement of conditions to a greater degree than formerly. The service has received great assistance from these public bodies and in turn has dealt with the problems arising as expeditiously as possible.

W. H. WALLACE.

REPORT OF THE PROVINCIAL APIARIST

(S. O. HILLERUD)

The season of 1937 differed markedly from that of 1936, being characterized by drouth or erratic flows in the first half of the season and steady, heavy flows during the latter part of July, all of August and most of September. Severe swarming was reported in sections, where beekeepers, despairing of a flow, neglected their colonies at critical times. The late flows completely changed the outlook and the unexpectedly high production record for 1937 is largely due to surpluses obtained by numerous, rather unskilled beekeepers, whose colonies were in condition to make the most of the late flow.

PRODUCTION

The total honey production is estimated at 2,160,000 pounds, an increase of 318,000 pounds over last year. It is valued at \$151,200. The crop of 1936 was worth \$150,000. In 1936 the average wholesale price was 8c a pound. This year, it is estimated that the average wholesale price was 7c a pound.

MARKETS

From the late fall of 1936 until well on in the winter of 1937, the heavy crop of the three Western Provinces exerted an increasingly depressing effect upon the market. Supplies were always liberal and the reports of the high production in Manitoba and Saskatchewan caused much uneasiness. Normally, sales in Saskatchewan absorb much of the South-eastern surplus, but the Saskatchewan needs were largely met by her own production, and the Albertans who usually sold their honey in Saskatchewan turned it into the well-supplied Alberta markets. In February special rates enabled Manitoba to move part of its surplus both East and West in unusual volume. Alberta beekeepers found, to their dismay, that Manitoba honey could be shipped from Winnipeg to Vancouver for less than it could be shipped from Edmonton to Vancouver. The flood of Manitoba honey on Alberta and B.C. markets induced price-cutting on a large scale, and for the first time honey was left in the hands of the Alberta beekeeper.

In the fall of 1937 Alberta commercial beekeepers determined that the price should be low enough to ensure the marketing of all Alberta honey and in the face of reports of shortage the wholesale prices set were as follows:—

No. 2½'s	\$ 4.75 per case
No. 5's	4.50 per case
No. 10's	4.25 per case

Much criticism has been voiced since it was felt the price was too low, but the purpose was achieved. The price-cutting, so prevalent in 1936, was greatly reduced and the unexpectedly large crop is practically all sold. The B.C. and Saskatchewan markets were regained.

EXPORT

Great Britain is the only export market readily available to Alberta beekeepers, but, owing to Alberta's geographical position, they pay the

highest shipping rates of any Province in the Dominion, and few have been disposed to consider export since local sales usually gave a greater net profit. Now that our production is definitely greater than our consumption this market is being given serious consideration and it is practically certain that carload lots of honey will be shipped next year if the season is favourable to honey production.

PACKAGE BEES

Package bees were difficult to obtain in 1937, and will, it is expected, be still more so in 1938. The American code prices have remained the same. Supersedure was a greater factor in 1937 than in 1936, particularly in the South. Some beekeepers have reported as high as 50% supersedure. It is interesting to note that the most skilled beekeepers reported the greater loss. It would appear that the less skilled man either did not notice supersedure or that the ability of the skilled men to create conditions conducive to high egg laying brought about an early breakdown in the queens. Southern queen producers had much difficulty, owing to adverse weather conditions, in the production of queens, and it is possible, the queens were less rugged than those produced under more favourable conditions.

EXPERIMENTAL WORK

The Branch is pleased to report satisfactory progress in the co-operative experiment relating to strains of bees and supersedure of queens. A report covering the three years' work, jointly carried out by the Apiculture Branch, the Alberta Beekeepers' Association and the University of California, will be published in 1938.

BEE POISONING

Two cases of alleged plant poisoning were reported from Raymond district, and a serious case of arsenical poisoning from the Eastern Irrigation District. In the latter case, the bees had evidently made their way through the cracks in the walls of a building, where poison bran was stored. The loss in bees and brood ceased as soon as fresh pollen was available.

DISEASE

For some unknown reason there was a marked reduction in the expected number of cases of American Foul Brood during 1937. The following table outlines the work done. There is serious need for more Inspectors:

Inspectors	Apiaries Visited	Colonies	Colonies with A.F.B.
Chalmers, R.	218	1,215	7
Graham, D.	29	571	7
Hillerud, S. O.	107	1,492	36
TOTAL	354	3,278	50

EXTENSION

In view of the lack of experience in beekeeping in most of the sections of Northern Alberta, where increased interest in beekeeping made a number of field days desirable, efforts were made to arrange inspection work and apiary demonstrations in connection with the lectures. Agricultural Representatives, G. S. Black, E. G. Wood, W. S. Scarth, Fred Magera and J. M. Fontaine, arranged for those held in their districts. Unfortunately,

weather conditions made inspection, and frequent demonstrations in manipulation, impossible. The film "The Realm of the Honey Bee" was shown in three schools where work was being done. At the time, it was felt that this type of work might be useful in advertising honey and creating an interest in beekeeping. Field days were held at the following points:—

Taber, Gem, Calgary, Vermilion, Mundare, Vegreville, Willingdon, Bonnyville, Lafonde, St. Paul, St. Paul dem., St. Lina, High Prairie, Grande Prairie, field lecture and day demonstration; Grande Prairie, evening; Swalwell, Westlock, Westlock (organization), Westlock, Athabasca, Donnelly, Alliance, Bon Accord (convention), Falher, Kathryn, Guy, Girouxville and Donnelly. Average attendance per meeting was 44, with a total of 1,330 persons.

INVESTIGATIONAL WORK

The honeys of 1937 showed wide variation in colour, flavour and granulation. Through the courtesy of Dr. Kelso, of the Industrial Laboratory, a number of analyses of honeys were made, the results of which are attached. Further work along this line will be done as funds and time permit. Unfortunately, the Industrial Laboratory lacks the equipment necessary to make complete analysis.

Dr. Thornton of the Dairy Department, University of Alberta, has made certain studies relating to the whipping of honey, which proved of value to Alberta bottlers meeting competition with this type of protection. We deeply appreciate this co-operation.

ANALYSIS OF SOUTHERN ALBERTA HONEY

December 17, 1937.

SAMPLE OF HONEY

SUBMITTED by Mr. S. O. Hillerud, Provincial Apiarist.

LABORATORY NUMBER: -37-4055, 6, 7.

	37-4055 Blue Tin	37-4056 & 7 2 Glass Jars
Immediate Polarization @ 20 deg. C.	-9.1	-5.0
Constant Polarization @ 20 deg. C.	-8.0	-3.91
Constant Polarization @ 87 deg. C.	Unable to obtain these readings with available apparatus.	
Invert Polarization @ 20 deg. C.	-3.0	-3.6
Invert sugar as dextrose	75.35%	75.80%
Sucrose	1.50%	2.89%
Moisture	22.93%	16.66%
Ash	0.070	0.048
Colour, 'Pfund'	2.1	0.9
	White	Extra White

I was unable to determine the levulose content of the honeys with the apparatus at my disposal.

"JAMES A. KELSO"

Provincial Analyst.

REPORT OF ANALYSIS

December 22, 1937.

SAMPLE OF HONEY WHIP

SUBMITTED BY Mr. S. O. Hillerud.

LABORATORY NUMBER 37-4081

Constant Polarization @ 20 deg. C.	-7.2
Invert Polarization @ 20 deg. C.	-6.4
Moisture %	15.22
Invert Sugar as Dextrose %	79.58
Sucrose %	0.67
Ash %	0.070
Colour (Pfund) (Extra light amber)	3.4
Honey was impregnated with minute air bubbles.	

"JAMES A. KELSO"

Director, Provincial Laboratories.

DEPARTMENT OF AGRICULTURE

HONEY PRODUCTION—1936 & 1937

Census District	1937 Production of Apiaries of Reporters	1936 Production of Apiaries of Reporters	1937 Average Per Colony	1936 Average Per Colony	1937 Estimated Production Non-Rp'trs	1936 Estimated Production Non-Rp'trs	1937 Est. Prod'n. for Census District	1936 Estimated Prod. for Cen. Dist.	1937 No. of Wintered Colonies	1936 No. of Wintered Colonies
1	144,981	146,286	192	198	5,376	6,534	150,357	153,000	76	30
2	595,131	502,327	155.7	166	106,810	260,454	701,941	763,000	711	235
3	542,928	469,824	188.5	161	110,272	139,909	653,200	610,000	375	22
4	15,777	3,021	134.8	66	5,931	7,260	21,708	19,000	50	4
5	110	70	36.6	35	37	0	147	70	2	..
6	41,012	34,810	125	110	47,375	16,280	88,387	52,000	133	61
7	9,070	5,338	78.8	63	43,340	9,213	52,410	9,000	39	9
8	38,460	23,293	105.3	102	24,745	1,836	63,205	25,000	230	177
9	10,088	5,250	127.6	90	3,955	1,620	14,043	7,000	56	20
10	25,524	7,554	100	89	36,200	8,613	61,724	17,000	123	34
11	89,483	87,702	85.0	125	46,860	13,125	136,343	104,100	691	337
12	3,160	7,590	39.7	112	2,223	791	3,098	8,400	27	..
13	111,907	1,315	85.1	188	1,787	5,640	4,937	7,000	31	..
14	4,104	41,113	234.7	115	77,970	26,450	189,877	67,530	334	183
15	1,322	1,162	102.6	106	11,799	636	15,903	1,900	91	..
16	1,633,922	1,337,975	77.7	79	1,398	632	2,720	6,000	16	5
					526,078	492,993	2,160,000	1,850,000	3,005	1,117

COLONIES 1936 & 1937

Census District	1937 Colonies of Reporters	1936 Colonies of Reporters	1937 Colonies of Non-Reporters Known to be Operating	1936 Colonies of Non-Reporters Known to be Operating	1937 Colonies Destroyed	1936 Colonies Destroyed	1937 Total No. of Colonies in Census Dist.	1936 Total No. of Colonies in Census Dist.
1	755	797	28	33	679	707	783	773
2	3,822	3,019	686	1,589	3,111	2,784	4,508	4,596
3	2,879	2,896	586	869	2,564	2,874	3,464	3,789
4	117	46	44	110	67	42	161	288
5	3	2	1	..	1	2	4	2
6	328	316	379	148	193	255	707	473
7	115	84	55	51	56	75	170	143
8	365	229	235	18	135	52	600	245
9	79	58	31	13	23	38	110	78
10	255	76	362	87	132	42	617	172
11	941	703	493	105	250	366	1,434	838
12	22	67	56	7	5	67	78	75
13	37	7	21	30	6	7	58	37
14	498	358	347	230	164	175	845	587
15	40	11	115	6	51	11	155	18
16	17	28	18	8	1	23	35	76
	10,273	8,637	3,456	3,271	7,380	7,520	13,729	12,185

C.D. 12 and 15:—Definite efforts were made toward increase and the colonies to be wintered are greater than the colonies reported in June.

DEPARTMENT OF AGRICULTURE

BEEKEEPERS, 1936 & 1937

Census District	1937 Reporters	1936 Reporters	1937 Non-Reporters Known to be Operating	1936 Non-Reporters Known to be Operating	1937 Total Number of Beekeepers in Census District	1936 Total Number of Beekeepers in Census District
1	7	6	11	6	18	15
2	78	71	62	68	135	280
3	33	26	16	24	49	75
4	14	9	12	12	26	40
5	2	2	1	0	3	3
6	67	53	31	31	98	122
7	45	34	21	22	66	60
8	69	36	58	8	127	72
9	13	9	11	8	24	20
10	85	22	148	34	233	70
11	174	94	100	41	274	260
12	8	2	4	4	12	14
13	14	2	7	9	21	25
14	54	25	41	39	95	60
15	14	3	35	3	49	18
16	5	4	6	2	11	18
	677	398	564	311	1,241	1,147

REPORT ON AGRICULTURAL RELIEF

(JOSEPH FICHT, SUPERVISOR)

Policies administered by this Branch during the past year have included the Relief Settlement Plan, the continuation of the 1936-37 feed relief policy, the distribution of relief seed, tractor fuel and feed for seeding and summer fallowing; distribution of fall rye seed, and feed relief for the present winter.

FEED AND FODDER

At the time of writing last year's report, a policy was in effect for the provision of feed and fodder for winter maintenance of live stock in the drouth area of Alberta. The policy also provided for payment of freight charges on limited shipments of feed purchased by applicants residing within the drouth area.

The purchase price and transportation costs under this policy were refunded by the Dominion Government in respect to supplies shipped to certain districts recognized by the Dominion authorities as being within the drouth area. The agreement granted by the Dominion Government in the fall of 1936 included only a portion of the area which had suffered a crop failure. The Provincial Government furnished assistance to the other parts of the drouth area. Certain re-adjustments were made during the winter. Under the final arrangement assistance was financed by the Dominion Government in 81 municipalities and improvement districts, while another 20 districts were financed by the Province.

Dominion assistance was extended up to April 30th, 1937, and after that date all issues of feed and tractor fuel were financed by the Province. It was also necessary to give Provincial assistance in provision of feed and tractor fuel oil for summer fallowing operations in the portion of the area where crop conditions in 1937 made it impossible for residents to obtain feed on their own land or credit for the purchase of fuel oil.

The area covered by the above mentioned policies was exceptionally large, as the 1936 drouth covered all of Southern Alberta and part of the Central portion of the Province. The Northern boundary of the area might be described as running through Cochrane, Stettler and Wainwright, with the exception of irrigated districts.

The effects of drouth have been even more severely felt during the 1937 season, but the area over which it has extended has been much smaller, being confined to the portion of the Province where drouth is recognized as a permanent problem. The Dominion Government has again entered into an agreement to reimburse the Province for expenditures on feed, fodder and transportation of same, with certain limitations as to area and total expenditures. Definite regulations have also been set as to the amount of live stock to be retained by those in need of assistance.

**FEED AND FODDER DISTRIBUTION
SEASON 1936-37**

PROVINCIAL POLICY

Oct. 15, 1936, to Oct. 15, 1937, (including feed for winter maintenance, spring work and summer fallowing.)

	Distributed on Relief	Sold for Cash
Oats	485,908 bus.	161,807 bus.
Wheat, Barley and Rye	2,892 bus.	225 bus.
Other feeds (corn, shorts, bran and chop).....	717,168 lbs.	678,075 lbs.
Hay, Straw and Greenfeed	7,552 tons	2,293 tons

FREE FREIGHT

Feed... 69 cars
Fodder 341 cars

DOMINION POLICY

Oct. 15, 1936, to April 30, 1937.

	Distributed on Relief	Sold for Cash
Oats	1,125,891 bus.	269,300 bus.
Wheat, Barley and Rye	9,617 bus.	1,579 bus.
Other feeds (Corn, Shorts, Bran, Chop and Screenings)	3,024,344 lbs.	1,070,150 lbs.
Hay, Straw, Greenfeed	18,056 tons	4,076 tons

FREE FREIGHT

Feed .. 207 cars
Fodder 1,171 cars

SEASON 1937-38**DOMINION POLICY**

Oct. 15, 1937, to Dec. 31, 1937.

Purchased for distribution:—

Oats	286,358 bus.
Wheat and Barley	38,616 bus.
Bran and Shorts	80,000 lbs.
Hay, Straw and Greenfeed	4,328 tons

In addition to the feed relief policy which is in operation this winter, provision was made under other policies for assistance in reducing the numbers of live stock to be wintered in the drouth area. These policies were financed by the Federal Government with the Province taking responsibility for administration of certain phases of the work. Details of the operation of these policies will be covered by the report of the Live Stock Commissioner's Office.

SEED RELIEF AND TRACTOR FUEL OIL

The financing of Relief Seed during the spring of 1937 was necessary over a very large portion of Southern and Central Alberta. The widespread drouth of the previous season, coupled with heavy hail losses in Central Alberta had caused a shortage of seed on farms in most of the districts east of the Calgary-Edmonton railway and South of the North Saskatchewan River. There were also a few districts in other parts of the Province in which farmers required assistance.

Arrangements were made whereby the municipalities and local improvement districts borrowed from the Banks to finance the purchase of seed grain and tractor fuel. These loans were guaranteed by the Provincial and Dominion Governments. Shipment and distribution of seed was supervised by this Branch. Wheat seed was purchased from local supplies, and oats and barley were supplied from stocks which had been held over at Edmonton and Calgary from the previous year.

Distribution of seed grain under the above policy was carried out in 121 municipal districts and 41 local improvement districts. Fuel oil was provided in 49 municipal districts and 41 local improvement districts. The orders for issuing the above commodities were approved by representatives

of this Branch but the accounts for actual distribution were kept by the Municipalities. It is estimated from orders issued that the total distribution of seed amounted to approximately 700,000 bushels of wheat, 450,000 bushels of oats, 50,000 bushels of barley and a few small issues of spring rye.

During the fall of 1937, provision was made by the Provincial Government to purchase and distribute fall rye as relief seed in the portion of the drouth area which was experiencing another crop failure. A total of 16,072 bushels of fall rye was purchased and distributed under this policy with issues being limited to a maximum of 20 bushels to each applicant. The demand for this seed was very heavy but available supplies were divided as evenly as possible and distributed in practically all parts of the drouth area. The fall rye purchases mentioned above consisted of 12 carload shipments containing 15,850 bushels, and 222 bushels purchased in the area.

RELIEF SETTLEMENT PLAN

The Relief Settlement Plan, under which assistance is provided for the purpose of settlement on the land of families who otherwise would be in receipt of relief, was continued during 1937.

This Plan is made possible by co-operation of the Federal, Provincial and Municipal Governments who share equally in expenditures made on behalf of families settled. Loans varying between \$700 and \$1,000, depending on the size of the family, are available for this purpose, and a portion of the loan is reserved to provide sustenance, if required, during the first three years of settlement. Since loans to approved applicants from unorganized districts can be shared by the Dominion and Province only, the maximum amount possible in these cases is \$600. Application is made to the Municipal or other authorities responsible for relief in each individual case, and upon receipt of their agreement the application is submitted to the Advisory Board for consideration.

The Advisory Board consists of representatives of the Dominion and the Province, together with representatives of the Colonization Departments of the Canadian National and Canadian Pacific Railways. Whenever possible the applicant and his wife appear before the Board for interview. If in the opinion of the Board the prospective settler is possessed of the necessary qualifications approval is given and he is referred to the Provincial authorities responsible for administration of the Plan, so that purchases of stock and equipment may be arranged.

The applicant is responsible for location of land and must submit a satisfactory agreement providing security of tenure for a period of at least three years. The land is then inspected by a representative of the Department who prepares a land appraisal report for consideration by the Advisory Board. Of eighty land appraisal reports submitted during 1937, sixty were considered satisfactory. In the year 1937, the Board received one hundred and forty-four applications, and approved one hundred and two of these. Fifty-four settlers have actually taken up residence on the land. Others have not yet located land or have abandoned the idea of settlement, while a few who were approved rather late in the season are awaiting settlement in the Spring. Sources of settlers placed during 1937

are as follows:—City of Edmonton, 18; City of Calgary, 10; other towns and Municipal Districts, 16; unorganized districts, 10.

Valuable assistance has been given by the Fieldmen and systematic inspections have been made. By this means it is possible to keep a close check on the progress of a settler. Inspectors are supplied with inventories showing equipment provided under the Plan so that the condition of the various items of stock and implements can be noted. The exchange of stock or equipment is at times of advantage to a settler, and since settlers are warned against the disposal of Government property without authority, such proposed transactions can be discussed at the time of inspection.

Since the inception of the Relief Settlement Plan in 1932, seven hundred and thirty-six families have been placed on farms, and of this number two hundred and seventy-eight have abandoned for causes listed:—Failures, 138; obtained other employment, or left the Province, 92; ill health, 26; domestic trouble, 16; death, 6. Prospects of success of the majority of settlers range from fair to good. Many of these families appear to be satisfactorily established, and our records show that one hundred and sixty-five families are at present on a self-supporting basis. At this season of the year, however, the fact must not be overlooked that a few of these may later find it necessary to apply for some temporary assistance to carry them through the winter.

REPORT OF THE DIRECTOR OF JUNIOR WORK

(W. J. ELLIOTT)

BOYS' AND GIRLS' CLUBS

Junior Agricultural Clubs have, for many years, held a prominent place in the work of the Department of Agriculture, but at no time has that work been of more importance than at present. The work of organizing the various live stock and grain clubs is largely in the hands of the District Agriculturists and there is, this year, some very progressive work under-way.

We are all aware of the importance of the live stock industry to the Province. We are a long way from both the Atlantic and Pacific sea ports, therefore, the freight on our staple grain products is high, and when the market warrants, it is always well to consider the converting of this raw farm produce into the finished meat or dairy products, which are moved, dollar for dollar, more cheaply by freight.

As suggested above, Junior Clubs are sponsored very largely by the District Agriculturists, and their activity and life is largely determined by the amount of time that these Agricultural officials are able to devote to this work. It is only fair to state that a multitude of field activities of various kinds, and from various Government Departments, find their way to the fieldmen for attention.

In spite of these various duties, Clubs have attained a prominent place in the Province, as may be determined by the showing that Alberta Clubs of all kinds make in competition with those of other Provinces. We are satisfied, however, that if clubs are to maintain their present place in the agricultural life of the Province, to say nothing of increasing in numbers, the detail work of organization, and management, must be removed, in large measure, from the shoulders of the District Agriculturists. As a matter of fact, this is coming to be true with some of our best Clubs which are almost entirely under the direction of a local interested committee, with the District Agriculturist as adviser to the committee and instructor for the Club members.

This is a fair way to look at the matter, for there are many districts which are asking for new or additional Clubs, and additional Clubs are very vital from the standpoint of live stock improvement, but these new districts cannot be reached with our present force, simply because the District Agriculturists cannot do more without sacrificing something in another direction.

JUNIOR LIVE STOCK CLUBS

Some very excellent Junior Beef Feeding projects have been undertaken. Last year two large Clubs were organized at Lacombe and Red Deer. This year, these two Clubs are continuing, and another has been added at Innisfail. Two years ago the Olds Junior Beef Club met with good success, but this year it has launched out on a larger and more progressive

basis. These are also Beef Clubs at Swalwell, North Edmonton, and an offer of a greatly revived Beef Club at Crossfield.

These Beef Club projects are in excellent shape, and undoubtedly are preparing a group of young feeders who will, some day, take their place among the real Beef feeders of the Province.

In the Swine field the Junior Clubs have had a great deal to do with, not only the development of numbers, but, particularly, in the development of quality in the hogs of Alberta. There are scores of districts in the Province, where, a very few years ago, there were few good hogs of any description; and where, today, there are comparatively few hogs that are not good. A great deal of this improvement may be laid at the doors of the Junior Swine Clubs. This improvement does not apply alone to Swine, but it applies, with particular force, to the young feeders who are to be the farmers of tomorrow.

The Dairy Calf Club problem is one that is difficult to carry, simply because it requires that the boy care for the calf for two years, or until she comes into production. This is a long time to keep up a boy's interest.

This matter is being given consideration and the District Agriculturists hope to devise some method of handling the situation so that it will be comparable, in time, with the Beef or Swine Clubs. In a Province that is as noted along dairy lines as is Alberta we are certainly neglecting something if we do not have a Dairy Calf Club to accompany the Beef, Swine and Grain teams that compete at Toronto.

The number of live stock clubs in 1937 was forty-five as compared with fifty-eight in 1936. During the past year there were thirty-one Swine Clubs, twelve Beef Clubs and two Dairy Clubs. Thus, this year Swine Clubs account for practically all the drop from the 1936 figures. The Beef Clubs are up one, and the Dairy Clubs down two.

SWINE CLUBS, AND MEMBERSHIP OF EACH

Neerlandia	12	Lacombe	16	Marwayne	23
Barrhead	17	Rimby	18	Dina-McLaughlin	14
Wahstao	29	Hay Lakes	15	Radway	20
Collinton	15	Duhamel	12	Egremont	19
Lethbridge	15	Liberty (Leduc)	17	Spedden	33
Taber	15	Pioneer	15	Ashmont	10
Cardston	20	Boyle	17	St. Paul	15
Swalwell	12	Myrnam	16	Beaver Lodge	14
Scales (Erskine)	13	Northern Valley	20	Spirit River	13
Coronation	12	Wasel	17	Berwyn	18
Fenn	12				

BEEF FEEDING CLUBS, AND MEMBERSHIP OF EACH

Lethbridge	25	Grainger	16	Grande Prairie	10
Crossfield	31	Scollard	18	Edmonton	30
Simon's Valley	19	Red Deer	41	Innisfail	47
Olds	10	Lacombe	39	Ste. Lina	19

DAIRY CLUBS, AND MEMBERSHIP OF EACH

Lethbridge	15	Didsbury	20
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SUMMARY OF STOCK CLUBS

Swine Clubs	514
Beef Feeding Clubs	275
Dairy Clubs	35
Stock Club Membership	824

With the higher price of grain during the past two years, the interest of a certain class of farmers and their Juniors has been lessened in club activities, so that there are fewer juniors than a year ago; though the

winnings at Toronto indicate that the ability and quality of those who are left is all that could be desired.

We wonder, however, if some of this drop in membership may not be accounted for by the fact that the District Agriculturists, who are on the firing line for the Department of Agriculture, are being loaded up with more and more duties, that are necessary of course, but may be the last straw, with the result that the efficiency of some of the work must suffer.

JUNIOR GRAIN CLUBS

In 1937 the number of grain clubs was further reduced in order that more careful supervision could be given by fieldmen of this Department. Clubs in 1937 were as follows:—Wheat, fifty-four; Oats, seventeen; Barley; nine; Flax, two; Potatoes, two. The total membership was twelve hundred and sixty-eight.

Many more districts applied for organization of clubs than could be taken care of. It is felt that more success results in careful supervision of a few clubs rather than the organization of many clubs that cannot receive sufficient attention.

The sponsoring organizations continued in 1937 to support grain clubs in paying part of the cost of seed as well as providing prizes for efficient work. These contributions are gratefully acknowledged.

These organizations are as follows:—Alberta Wheat Pool, Calgary; United Grain Growers Limited, Calgary; Canada Malting Company, Calgary; and the Alberta Linseed Oil Company, Medicine Hat.

Further information with respect to grain clubs will be found in the report of the Field Crops Commissioner.

NATIONAL JUDGING COMPETITION

A Province that can send three judging teams to the Toronto Royal Show and, in competition with all other Provinces, come back with two firsts and a second is in a very promising way as far as its agricultural status is concerned. This speaks well, not only for the young people who are being trained, but it indicates, beyond a question of doubt, that the calibre, ability and influence of Alberta's District Agriculturists is distinctly the equal, if not the superior, of that of any other Province in Canada.

After the district elimination contests were held at Lethbridge, Lacombe, Grande Prairie and Edmonton, the winners in the various classes met at the University Farm on October 28th for the finals, which would indicate the teams that would go to Toronto.

Many of the finals in the Provincial contests were very closely contested. In the grain section eight teams competed and the Wembley team, consisting of Albert Allsop and Lloyd Rigby, and coached by George Black, District Agriculturist, won top honors. While in the Swine division five teams competed and the Conjuring Creek team, consisting of Howard Fulcher and Robert Ferguson, won first place,—Peter Wyllie, District Agriculturist, coach.

In the Beef section only two teams were left to compete,—North Edmonton and Red Deer. The former won by a small margin. The coach,—William Morris.

So that the Wembley grain team, the Conjuring Creek swine team and the Edmonton Beef team, represented the Province for the finals in the East.

The Toronto Royal contest is the great event of the year as far as boys' and girls' clubs are concerned. The teams representing Alberta this year were very successful as they returned with two first places and one second. The Wembley team won the Dominion Championship in grain judging, the Conjuring Creek team in the Swine contest. The Edmonton team came second in their division.

In the entries of seed grain the Alberta club members also did exceedingly well at Toronto. In the Oat class George Topolnisky, Sniatyn, came first with Lloyd Rigby, Wembley, second; while in the Barley class first went to J. W. Lastiwka of Willingdon, with Stanley Rosychuk, Downing, second.

In the Hard Winter Wheat classes for Juniors, Alberta Club members practically swept the boards, taking twenty-one of the first twenty-five places. In this class James Sebastian took first place, with W. J. Rigby second. James Sebastian also won the Canadian championship for his wheat in the open competition.

Club Bulletins—These were issued three times during the year. The last issue was of eight pages, covering full particulars regarding the Provincial elimination contests, and as well, the final contests held at Toronto. This paper is of great interest to the Club members, and as well is an important factor in the general junior club program.

Radio Addresses—A bi-weekly series of radio talks over the University Radio Station and its associated network, for the benefit of Club members, was continued through the winter and fall seasons. These talks appear to assist in sustaining Club interest during that part of the year when the Clubs are less active. The addresses were given alternately on Live Stock and Grain Club Work by the Director and officers of the Field Crops Branch.

REPORT ON FARMERS' FIELD DAYS, SHORT COURSES AND
CROP TESTING FIELD DAYS(W. J. ELLIOT, *Supervisor*)

Following the policy of former years, co-operative efforts, on the part of the Federal and Provincial Governments, the Agricultural faculty of the University, the Soldiers' Settlement Board, together with several leading grain companies, the Canada Malting Company, Seed Growers' Association and the Stock Breeders' Associations, have combined to initiate Livestock, Crop and Junior Field days, and other short courses.

All proposed events of this nature are now reported to the Provincial Director, who has charge of the complete schedule, in order that overlapping of services and conflict of dates might be avoided. This plan appears to be working out very satisfactorily for all concerned.

A total of ninety-three days of various kinds and under various auspices were held between March 3rd and August 7th, 1937. The Department representatives were either wholly responsible, or assisted materially, in all of these special days.

FIELD DAYS

Field days were undertaken in three forms:—those concerning general agricultural problems, those dealing with senior crop testing matters and those dealing with junior crop and club problems.

In the general, as well as the special field days, the Provincial Department of Agriculture received the support of the Agricultural staff from the University. These courses were fairly well attended, and in all cases the subjects were, as far as possible, suited to the district. The interest was keen and the general impressions were that the courses were well worth while. In the same co-operative spirit the Provincial Department of Agriculture assisted with field days conducted by the Federal Department at their illustration stations, and also with the field days sponsored by the Breeders' Associations.

A series of such special days were also held in the Peace River during the latter part of July. Four things were stressed,—horses, swine, forage crops and poultry.

SENIOR CROP TESTING

The Provincial Soils and Crops Branch, also staff members from the Olds and Vermilion Schools, assisted in the crop testing plan sponsored by a group of the Elevator Companies. Principal Murray and Mr. A. T. Kemp of Olds, and Mr. A. M. Wilson of Vermilion, assisted in these field days in territory surrounding the Schools of Agriculture, and Mr. Buckingham assisted by Dr. Neatby of the University, held nineteen of these field days under the Provincial Department's Crop Testing policy.

Under this scheme samples of the wheat, oats and barley, taken from seed actually being sown by farmers, are grown in rod rows, side by side, and under conditions that give actual comparisons. As often as possible

this seed is actually taken from the grain drill; in other cases it is secured from the grain grown and delivered at the elevator. The whole purpose is to show definitely the tremendous mixture there is in much of the seed that, on superficial inspection, may look fairly good. When the expert had picked out and actually explained the various grains growing in such a row, the owner, in a large percentage of the cases, exclaimed, "Surely that is not the seed I planted at home." But when such seed actually came out of his drill the lesson was impressive.

JUNIOR FIELD CROP DAYS

It is quite apparent that probably the best seed improvement work is being done with the juniors. There are districts where the trend for better seed, and more care in the selection of seed, is very evident: And in many cases this improvement in seed, and the awareness of the fallacy of poor seed, has been introduced through the juniors and their grain club. As a matter of fact, it is hard to calculate what junior clubs of all kinds,—Grain, Beef, Swine and Dairy, have meant to the improvement of these things in the Province. And more than that, what they have meant in the growing of a generation of boys who have learned to select and grow only the best.

The Provincial Soils and Crops Branch has held some eighteen special field days for juniors and these would include most of the twelve hundred grain club juniors in the Province.

One of the most enthusiastic junior field days held during the year was when H. W. Scott, District Agriculturist from Camrose, brought some two hundred juniors for an outing and day of information at the Vermilion School of Agriculture. These were joined by several clubs handled by D. A. Andrew of the Vermilion Farm, and Fred Magera, District Agriculturist of Willingdon, and swelled the number to two hundred and fifty. After a day spent with practical classes other than those that might be considered as following a strict grain club program, the day finished with a ball game, and supper and coffee on the lawn, then the journey home, with the memories of a wonderful day and new associations and friendships formed.

REPORT OF THE WOMEN'S BUREAU

(W. J. ELLIOT, *Supervisor*)

The position of Director of the Alberta Women's Bureaus for the Province was discontinued in 1935, and since that date the activities of the branch have been confined almost entirely to a program of lecture demonstrations throughout the summer. This plan coincided nicely with that of the Schools of Agriculture, for the lady instructors of those institutions were free to devote several months during the summer to this particular work.

Beginning May 10th, Miss McIntyre of Olds prepared the itineraries, and three separate programs were offered. The meetings were held at various towns, and the Social Credit, U.F.W.A. and Women's Institutes taking part were as follows:

A discussion of various household matters, with cooking demonstrations by Miss McIntyre, were held at the following points: (In some cases the name of the local is given.)

May 7—Drumheller	Aug. 12—Lomond
June 1—Westcott	Aug. 13—Taber
June 2—Ridgewood	Aug. 14—"New West"
June 4—Poplar Lake	Aug. 16—Vauxhall
June 8—"Independence"	Aug. 18—"Dinton"
June 9—Busby	Aug. 19—Brant
June 10—Westlock	Aug. 20—"Berrywater"
June 11—Westlock	Aug. 23—High Hill
June 12—"Sunny Bend"	Aug. 24—"Good Deeds"
June 15—Rainier	Aug. 25—Champion
Aug. 4—Westward Ho	Aug. 27—Battersea"
Aug. 5 and 6—Tudor	Aug. 30—"United Prairie"
Aug. 10—Arrowwood	

A discussion of various household matters, with cooking demonstrations by Miss McCaig, were held at the following points: (In some cases the name of the local is given.)

Aug. 4—Winterburn	Aug. 18—"Silveretts"
Aug. 5—Calmar	Aug. 20—Veteran
Aug. 6—Conjuring Creek	Aug. 21—Loyalist
Aug. 9—Millet	Aug. 25—Condor
Aug. 11—Spring Valley	Aug. 26—Leslieville
Aug. 12—"Eclipse"	Aug. 28—Dovercourt
Aug. 13—"Chatelaine Club"	Aug. 30—R. Mtn. Hse.
Aug. 16—Botha	

Sewing and dressmaking courses, by Miss Switzer, were held at the following points: Many of these were two-day sessions.

Aug. 3 and 4—Poplar Ridge	Sept. 7—"Battle View"
Aug. 5 and 6—Hazel Hill	Sept. 8—Hayter
Aug. 7—Birch Lake	Sept. 10—Bashaw
Aug. 10 and 11—Beaver River	Sept. 11—Elnora
Aug. 12 and 13—Flat Lake	Sept. 15—"Farrer Lake"
Aug. 17 and 18—"Uneeda"	Sept. 17—Youngstown
Aug. 23 and 24—Ministic Lake	Sept. 18—Keystone
Aug. 25 and 26—Iron Creek	Sept. 22 and 23—Hemaruka
Aug. 27—"Leaholm"	Sept. 24-27—Sedalia
Aug. 30—Lake de May	Sept. 29 and 30—"Wild Rose"
Aug. 31—Camrose	Oct. 1 and 2—Fenn
Sept. 1—Camrose	Oct. 6—Olds
Sept. 2 and 3—Strome	

Thus, there were a total of 72 meetings held with an aggregate attendance of 1,858, or an average of 26 at each meeting.

The women in the country seem to appreciate such meetings very much, both from the educational and social standpoint, and they appear to be abundantly worth while. One of the instructors noted particularly, "the felt need among farm women for a central source of information for their activities, and for such demonstration meetings as have been held during the past summer."

The general impression received by all three instructors was to the effect that the meetings did much good and were thoroughly appreciated, and it was suggested, on numerous occasions, that if the women of the Province, generally, knew of this service it would be called for much more than at present.

There was a feeling that, perhaps, too many subjects were being offered, each year, for it invariably led to a great variety of choices on the part of the women's organizations, and this made it difficult for the instructors to prepare for so many discussions or demonstrations. It was felt that by selecting a reasonable number, which would offer variety, a better service could be rendered.

REPORT OF THE DISTRICT AGRICULTURISTS

CARDSTON DISTRICT

(CHAS. O. ASPLUND)

GENERAL CONDITIONS

There existed a wide variation in crop conditions in this district. The section east of Wrentham had very light crops with yields of from 2 to 10 bushels prevailing, and much acreage not harvested. From Wrentham west conditions progressively improved until beginning at Magrath and extending westward into the foothills crops were highly satisfactory. At Cardston the precipitation for the year is reported as 17.68 inches (the first normal annual rainfall in several years.) The precipitation for May, June and July, the critical months of growth, totalled 9.50 inches of which 6 inches fell in June.

The high June rainfall increased river flow and resulted in a satisfactory supply of irrigation water. This precipitation was also largely responsible for the excellent condition of the range lands that prevailed over most of the district.

The early months of the year were characterized by heavy snow and high winds which blocked roads and made transportation of feed very difficult. For as many as eight days at a time transportation was completely tied up.

Soil drifting was not serious over most of the district during the winter and early spring. Some crops were blown out, however, in the Granum, Claresholm and Stavely districts. Strip farming and plowless fallow are unquestionably having a very important influence in solving this problem as they become more universally adopted.

Many crops had begun to suffer for moisture before the June rains came, consequently there was some second growth adversely affecting grades. The bulk of the wheat was of excellent quality however, weighing very well and grading mostly one and two.

Harvesting was completed very satisfactorily with no frost or other damage.

Live stock entered the winter of 1937-38 in excellent condition and there is an abundance of feed to carry them through the winter. There will be a considerable surplus of coarse feed for sale.

Except for two short cold snaps during which the temperature went to 20 degrees below zero the winter thus far has been almost ideal.

SEED AND FEED RELIEF FOR 1936-37

Practically the entire district was dependent on Government assistance for feed and seed. Although live stock went into the winter in poor condition and feed reserves were almost nil, losses were not heavy, except in a

few individual cases. From reports received it is conservatively estimated that losses did not exceed five per cent. Practically the entire time of this office was occupied until the first of the year in the distribution of feed. Later the assistance of one man was given but even then much time was devoted to this work. At Cardston alone over 100 car loads of feed were distributed and other points received like amounts.

In respect to seed there was considerable criticism of the allotments made by the Relief Branch but in the long run there was no curtailment of acreage due to this policy. All well prepared ground was seeded and the policy worked out to the advantage of everyone concerned.

Under the Government policy for the distribution of improved seed we placed two car loads of wheat and two car loads of oats.

RAM BONUS POLICY

Under this policy we purchased at the Calgary Ram Sale and from other sources 40 Rams for distribution in this district. This is a service the demand for which is increasing yearly and it should result in a distinct improvement in the quality of feeder lambs in this district.

PURCHASE OF BULLS

At the Calgary Bull Sale and from private sources we assisted in the purchase of ten pure-bred beef bulls for various farmers and ranchers.

JUNIOR CLUBS

Grain Clubs 2.....	Membership 37
Swine Clubs 1.....	Membership 20

The Cardston Junior Swine Club team won the District Eliminations and competed for Provincial honours at Edmonton.

We assisted Mr. A. A. Campbell with the Lethbridge District Beef Calf Club and several of the competing members were from the Cardston district. It has been thought inadvisable to sponsor another Beef Club in this district as long as the Lethbridge Club is serving the purposes of the entire district so admirably. The continued drouth conditions for the past several years have been very discouraging for Junior work. It is hoped that with the improved situation during 1937 that more interest will be taken during the coming year.

SCHOOL FAIRS

School fairs continue to be a major activity in this part of the Province. There were fourteen fairs held in my district this Autumn, at which I assisted with the judging.

ADDITIONAL WORK

I was asked by the Department to do the following work outside my district: To assist with the Junior Judging work at the Calgary Spring Show. These classes were entered by large numbers of boys and girls and were very successfully carried out. To assist with the Junior Camp at Calgary. This we felt was also entirely successful. Because of the ill-

ness of Mr. Campbell I was required to take charge of the Junior Camp and other Junior work at Lethbridge. We had very excellent co-operation from all concerned and the Camp went off very smoothly. In January I spent three weeks at the Provincial School of Agriculture, Olds, teaching a short course in irrigation. In company with Dr. Fairfield and sugar factory officials several days were spent in judging the Fifteen Club Beet fields.

LIVE STOCK

Since early September my time has largely been taken up with the work of supervising the operation of the Red Label Feeders' Association Ltd. This co-operative feeders organization is incorporated under The Co-operative Societies Act and has obtained a Government loan of \$75,000 for the purchase of feeder live stock. My services as supervisor were asked for and granted by the Department.

We bought and placed in the hands of members of the Association at a cost of roughly \$72,000, 1,452 cattle, 2,380 sheep and lambs and 21 horses. Sales of lambs are just now beginning. Prices are highly unsatisfactory to date. Most of this live stock is being fed in the vicinity of the two Sugar Factories. The hopeful aspect at the moment is that gains can be produced at low cost by the liberal use of sugar factory by-products.

So far as the irrigated section of the district is concerned this is by far the most important work to be done as feeding of live stock is basic to the success of irrigation farming from at least two angles. First in the utilizing of hay and other unmarketable products and secondly in the maintenance of soil fertility.

In addition to the live stock financed by the Association, its Members are feeding approximately 900 cattle and 7,000 lambs.

There are on feed in this district a considerably increased number of live stock than during the preceding year. It is estimated that over 5,000 cattle and 25,000 lambs are on feed.

DAIRYING

The production of creamery butter and cheese were both increased in this district. This was largely due to improved feed conditions rather than to an increase in the number of cows being milked. Satisfactory butter fat prices also were consistently reserved averaging about 2 cents per pound more than for 1936. Production of butter at the local creamery amounted to 140,376 pounds as compared with 136,705 pounds for 1936, and 83,179 pounds of cheese were manufactured as compared with 53,670 pounds in 1936.

HOGS

Swine production has received a rather serious set back due to the unsatisfactory relationship between grain and pork prices. There was a very definite reduction in the number of hogs in this district.

SHEEP

Improved wool and feeder lamb prices awakened considerable interest in sheep breeding and as a result there was an increase in the number

of ewes being kept for breeding purposes. There was also a considerable number of breeding ewes purchased in the drouth areas and brought into the district.

HORSES

There were more mares bred than for several years. Most of the stallions are of good type and the foals are generally an improvement over the dams but there are still far too many inferior stallions being used in the district.

INSECTS

There was a spotted outbreak of cutworms that destroyed several thousand acres which required reseeding. Grasshopper damage was held to a minimum by a successful poisoning campaign.

SPECIAL CROPS

The potato yield was high and the acreage larger than for some time. Prices, however, have been very unsatisfactory.

SUGAR BEETS

This year proved altogether the best year to the sugar beet grower. Final price for the 1936 crop on the basis of one-half the sugar was \$6.55 per ton which is the best price in several years. If sugar prices hold steady this price will be materially exceeded for the 1937 crop.

Following is a brief statistical summary of the 1937 crop:—Acreage planted 20,229. Harvested 19,829; making a total abandoned acreage of only 400. Beets delivered to factories 235,480 tons, an average yield on harvested acreage of 11.87. Sugar percentage averaged 18.166 and there was a recovery of 75,600,000 pounds of unrefined sugar.

The Raymond Factory sliced 122,629 tons of beets the percentage sugar was 18.008 and the total recovery 40,500,000 pounds.

A considerable acreage of peas for seed were grown under contract. Returns for this crop were fair.

LAND PREPARATION AND CONDITION

There is a comparatively large acreage of well prepared summer-fallow throughout the district. Due to good rains in the fall subsoil moisture is better than for several years. Most grass lands went into the winter with a good covering of grass and fairly high moisture content. This should assure good early spring range at least.

There will be ample seed supplies except in the extreme eastern section. With firm wheat prices a substantially increased wheat acreage is anticipated for 1938.

LETHBRIDGE DISTRICT

(A. A. CAMPBELL)

Precipitation figures for 1937 as recorded at the Dominion Experimental Farm, Lethbridge:—

January	1.76 inches
February	.42 "
March	.79 "
April	.45 "
May	2.38 "
June	3.19 "
July	2.91 "
August	.86 "
September	1.10 "
October	1.33 "
November	.70 "
December	.38 "

Total precipitation was 16.27 inches which is .62 inches over a thirty-five year average of 15.65 inches. The precipitation during the growing months of May, June and July totalled 8.48 inches or about double that of the previous year.

One of the most severe winters was experienced in the history of the District, with prolonged periods of sub-zero temperatures, and impassable road conditions. Live stock feeds were scarce and high in price.

Conditions at seeding time were not promising owing to lack of both surface and subsoil moisture, and prevailing heavy winds, which caused severe soil drifting, also necessitating some re-seeding. A large area of light land extending from Claresholm eastward to Vauxhall suffered extensive damage in this respect. There are numerous large farms in this area which were seeded three times and yet produced no crop.

East of the Canadian Pacific Railway line running from Stirling to Vulcan, owing to lack of rain and reserve moisture, conditions continued bad throughout the growing season, with the result that vast areas yielded an average of only two bushels of wheat per acre on seeded acreage. West of this line, however, wheat crops responded to late rains and eventually gave good returns, averaging close to twenty bushels per acre. Grazing conditions were poor all season on the large leases and consequently winter feed was scarce.

The supply of irrigation water to farmers on the Irrigation Projects was satisfactory and some exceptionally high yields were obtained, also a good average. The yields in the various irrigation projects have generally been termed the best irrigated crop in the history of the projects.

LIVE STOCK

There was a heavy decrease in the volume of live stock handled at the Lethbridge Stockyards during 1937 as compared with the previous year. Reports indicate that 9,634 less head were received here during 1937 than in 1936, and 27,023 fewer shipped out.

The following table shows the movement of all live stock, both in cars and by the head during the past two years:—

Live stock received—

	1937		1936	
Horses	67 cars	1,107 head	162 cars	2,950 head
Cattle	507 cars	15,488 head	490 cars	15,684 head
Sheep	63 cars	12,853 head	77 cars	14,631 head
Hogs	321 cars	18,248 head	391 cars	24,065 head
Total	958 cars	47,696 head	1,120 cars	57,330 head

Live stock shipped—

	1937		1936	
Horses	82 cars	1,558 head	194 cars	3,814 head
Cattle	516 cars	15,605 head	559 cars	17,332 head
Sheep	79 cars	14,270 head	112 cars	21,606 head
Hogs	574 cars	46,041 head	737 cars	61,745 head
Total	1,251 cars	77,474 head	1,602 cars	104,497 head

Decrease as follows:—

Horses	2,256
Cattle	1,727
Sheep	7,336
Hogs	15,704

Horses.—A survey of the horse situation in the District shows that some good Percheron and Belgian stallions were brought in during the year, and also shows that there is room for considerable improvement. There are numerous stallions in the District but the irony of the situation is that the best stallions are not getting as many mares as they can handle.

A horse sale was held early in March at the local Exhibition Grounds. Top price realized was \$131.00 and the average price for 126 head was \$62.13. The majority of the horses were not large and required more conditioning.

Cattle.—Owing to the high cost to cattlemen of bringing herds through last winter there was little money available to purchase many new bulls.

The heavy liquidation of live stock by ranchers the previous year resulted in light shipments this season. Very few calves were offered for sale and some purchases were made for re-stocking ranches.

Feeding operations are again getting back to normal, mostly in close proximity to the Sugar Factory at Picture Butte where considerable beet pulp is fed. Approximately 2,000 head of cattle are on feed.

There has been a tremendous decrease in numbers of cattle placed in the irrigated areas for wintering. Only a few car loads have been shipped in from the dry areas.

As usual beef cattle exhibited at the Toronto Royal by local live stock men, made a most creditable showing:—the exhibitors being the C.P.R. Farm, Coaldale; McIntyre Ranches, and Mr. C. R. Daniel of Lethbridge.

There has been a 10 per cent decrease in the numbers of dairy cattle. Approximately 80,000 pounds of surplus milk per month is delivered to the city of Lethbridge, which is a decrease of 20,000 pounds per month from the previous year.

Present price is \$2.20 per cwt. for City sweet milk, and surplus milk is .32 cents per pound b.f.

A Cheese Factory has been built at Coaldale, which will start operations early in January, 1938. It is hoped that this venture will prove successful and be of benefit to the dairymen of that locality.

Sheep.—A normal number of lambs were born, in point of numbers, and came off the range at good weights with a heavier percentage of fats than usual. Range lamb prices were from \$5.75 to \$6.00 per cwt.

Approximately 18,000 lambs are on feed this season with the majority of these lambs at Picture Butte.

Swine.—Hog gradings at local yards show a 25 per cent decrease. The quality of hogs is again showing marked improvement particularly during the last three months when the finish has been good and practically no run of feeder hogs. There is an estimated 3 per cent decrease in numbers of hogs on farms.

A number of good Yorkshire boars were brought into the District this Fall.

Poultry.—The poultry industry has shown marked improvement. There was a good demand for baby chicks, and eggs brought satisfactory prices.

Owing to scarcity of feed, birds were not in good condition prior to threshing season but since that time improvement has been made and now the quality and condition of poultry is better than for some years. Blood-testing results showed a decided improvement over other years.

There was no increase in the numbers of turkeys, but they came on the market in better condition.

There were fewer geese and ducks.

FIELD CROP IMPROVEMENT

Soils.—The value of strip farming with conservation of trash cover which is extensively practised throughout this District was clearly exemplified this past season. Considerable soil drifting occurred. Prevention of soil drifting will continue to be one of the major problems of the dry land farmer. It is worthy of note here that Mr. C. S. Noble of Nobleford has made and is using with marked success, a cultivator which is now called the Noble Blade Cultivator. This machine has great promise as a weed eradicator and conserver of trash cover.

Mention might also be made now regarding the purchase by a number of irrigation farmers, of the Eversman Land Leveller. This modern machine might be called a combination of a land packer, float and fresnoe. The levellers will undoubtedly prove of great benefit to the irrigation farmers.

Fertilizers.—Fertilizers are used by practically all sugar beet growers, and much consideration is given to rotations which include leguminous crop. Grain growers and potato growers are also using fertilizers quite extensively with good results.

Cereal Crops.—The cereals most generally grown are Marquis Wheat, Banner and Victory Oats, and Trebi Barley. There is a nucleus of good growers and expert showmen in the District and again this year they made a good showing at Toronto and Chicago. The commercial grading of irrigated wheat this season was generally No. 2 Northern and lower, owing to green or starchy kernels.

Enquiries are already coming in for registered seed. The collection of seed drill survey samples would indicate that greater care should be made in seed selection by many growers.

Forage and Pasture Crops.—Alfalfa is the main hay crop. There is an estimated 3,000 tons surplus which is moving slowly at \$12.00 per ton on car. The alfalfa acreage should be increased, but periodically it is hard to sell, making it difficult to induce farmers to increase acreage.

Sweet clover is grown extensively to fit in with the necessary rotation where sugar beets are grown. A few farmers are making a success in growing Crested Wheat Grass and Creeping Red Fescue for seed. Alfalfa seed production is very light.

No increase has been made in irrigated pasture mixtures.

MISCELLANEOUS CROPS

Sugar Beets.—There was not much increase in beet acreage. Another another good crop was obtained this year averaging close to 11.6 tons per acre. The crop was harvested under fair weather conditions. Beet tops were again carefully handled for winter feeding purposes. Beet growing is proving of great value to the large number of farmers engaged in this business.

Fodder Corn.—A few growers had excellent yields of fodder and sweet corn of good quality. There will be a quantity of good seed corn for sale.

Potatoes.—The estimated acreage in potatoes this year was 6,000 acres and the average yield $4\frac{1}{2}$ tons of marketable potatoes. General quality and keeping qualities showed much improvement. Equivalent of 200 cars, out of 550 cars, have already been sold at \$8.00 per ton. The demand has been for Relief orders, mostly from Saskatchewan. A number of the better growers are making inquiries for certified seed.

In an attempt to find a variety which may be more profitable to the grower, also satisfactory to the trade, ten growers planted a small quantity of Rural Russets, and obtained very good results. These ten growers intend increasing their acreage of this variety during the coming season to substantiate this year's results.

Very interesting fertilizer experiments were carried on by a number of growers in co-operation with the Consolidated Mining and Smelting Company.

The Potato Seed Exchange Policy was again carried out this year, whereby the grower received one bushel of Certified Netted Gem seed potatoes for every two bushels of table stock potatoes delivered to the wholesalers. A number of the better growers availed themselves of this opportunity.

Peas and Beans.—Contract acreage of peas and beans showed an increase. The Taber Canning Co., operating in the Taber and Barnwell area, showed increase in their acreage of specialized crops such as Corn, Peas, Beans and Pumpkins.

Acreage of The O'Loane Keily Co. of Vancouver, operating in the Lethbridge area, remained about the same.

The Grimm Alfalfa Seed Growers Limited of Brooks, operating in the Lethbridge Northern and Coaldale Districts had about 1,000 acres in peas and beans.

Some very satisfactory yields were obtained by some of the growers.

Contract prices were much higher this year. One Company paid \$60.00 per ton for peas and \$90.00 per ton for beans.

Weeds.—There still remains considerable work for a Weed Inspector in enforcing the destruction of noxious weeds. Some of the newer perennials are getting a foothold:—Hoary Cress, Russian Knapweed and Leafy Spurge. Downey Brome continues to spread.

Insect Pests.—Grasshoppers were very plentiful and a heavy demand for poison bait existed. During the first eight weeks of campaign an average of 40 tons per day of poison bait was sent out from the local mixing station.

Pale Western Cutworm.—Pale Western Cutworm also caused damage to crops in certain areas.

SHORT COURSES AND FIELD DAYS

Numerous Field Days and Meetings were arranged and attended throughout the year, such as the necessary meetings for Junior Clubs, Park Boards, Potato Growers, Live Stock Breeders and machinery demonstrations. Successful Field Days were held in connection with Potato Growers and Sheep Ranchers.

BOYS' AND GIRLS' CLUB WORK

Junior Clubs comprised:—

Lethbridge District Wheat Club	15 members
Lethbridge District Potato Club	25 members
Lethbridge District Dairy Calf Club	12 members
Lethbridge District Beef Calf Feeding Club	19 members
Lethbridge District Swine Club	15 members
Taber District Swine Club	15 members
Total	101 members

Plots placed at the top in the Wheat and Potato Clubs were very creditable.

In the Wheat Club, Leonard Haney was first with a score of 96 points, and in the Potato Plots, Andrew Kovich won first with a 96 point score. Incidentally these scores were high in the Province. The average score, for Potato plots was 79.95 points, and for wheat plots 77.25 points.

The Lethbridge Junior Grain Judging Team was placed second in the final elimination test in Edmonton.

Exhibits of live stock made by the Members of the Dairy Calf Club, at their Achievement Day, held in conjunction with the Lethbridge Exhibition, were up to the usual high standard.

An excellent showing of calves was also made by the Beef Calf Feeding Club Members and was followed by the most successful sale of calves since the Club commenced fourteen years ago. The top sale price of eighty-five cents per pound was paid by the T. Eaton Co. and the second and third prize calves were bought by Safeway Stores Ltd. at thirty cents and seventeen cents per pound respectively. Average sale price for nineteen calves being \$15.25 per cwt.

Another good club of 23 members is now under way for the 1938 Fair.

Exhibits of pairs of Bacon Type hogs by both the Lethbridge and Taber Clubs always created very favourable comment wherever shown.

BOYS' AND GIRLS' CAMP

Twenty-two girls and thirty-two boys were registered at the Boys' and Girls' Camp held in conjunction with the Lethbridge Fair.

Instruction and contests were held in judging Dairy and Beef cattle, Swine and Grains. A good programme of entertainment was also arranged. Much interest and appreciation was in evidence by these young people.

SCHOOL FAIRS

I judged live stock and poultry at School Fairs at the following points: Iron Springs, Lethbridge, Coaldale, Purple Springs and Grassy Lake.

Generally these fairs showed improvement over the previous year. This was the first Fair held in Lethbridge and the organization in charge have made an excellent start. The Fair was held at the Exhibition Grounds and the large entries were well displayed.

The local Swine Club held its Achievement Day at the School Fair, which proved advantageous to both organizations.

TREE PLANTING

A number of farmers are making good progress in improving the appearance of their home surroundings by careful selection and planting of trees and shrubs. Particularly good work continues to be done at Park Lake in the 15-acre Park at that point.

AGRICULTURAL RELIEF

Owing to severe drouth conditions in the East portion of this District, feed and seed relief demands will again be heavy.

BROOKS DISTRICT

(M. L. FRENG)

Since taking up my duties at Brooks, in addition to District Agriculturist work the writer has had the supervision of the Provincial Horticultural Station together with other land which was taken over by the Department of Agriculture.

This district experienced extremely severe weather during the winter of 1937 and followed up with one of the driest growing seasons on record, as noted in our Horticultural Station temperature and precipitation record sheet.

The live stock men under range condition suffered some losses and the stock generally came through in a very thin condition. But in spite of the

adverse weather conditions, very satisfactory crops were harvested throughout the Eastern Irrigation district. But the most of the farmers operating under dry land conditions suffered a total crop failure.

Field Crops.—Two cars of certified seed wheat was distributed throughout this district and about twenty farmers contracted to grow a considerable acreage of malting barley for the Canada Malting Co.

The Grimm alfalfa Seed Plant again contracted with farmers to grow approximately twenty-five hundred acres of canning and garden peas. It is estimated that about two and one-half million pounds of high class seed was harvested.

A considerable quantity of sweet corn, vegetables and fruit of exceptional quality were shipped from this district. However, much expansion in this connection cannot be undertaken until we can get a canning factory located in this district.

Fodder Crops.—While there is some interest in the production of various grasses in this district for seed purposes and permanent pastures, Alfalfa is the most popular both from the standpoint of quantity and quality.

Live Stock.—A large number of horses were sold during the past season, mostly shipped to eastern markets. A community horse sale was also held at Brooks where there were about two hundred horses listed and the prices were considered satisfactory.

There is an increased interest in horse breeding among ranchers and farmers throughout this area and I look for a few more stallions being placed here this coming season.

Approximately 20,000 lambs were fattened throughout the Eastern Irrigation district during the 1936-37 season. The tail-enders were marketed during May, and the returns were quite satisfactory to the feeder.

There will also be a fair number of lambs on feed again this winter. But owing to the higher price on feeder lambs, and the fact that feed prices looked quite encouraging, this resulted in a reduced number of lambs being placed in feed lots this winter.

Under the Optional Marketing Plan several assembling points were arranged which enabled many farmers to dispose of their surplus cattle. The prices realized were very satisfactory and many voiced their appreciation for this service.

A Grain Club was organized including twenty-three members from the Scandia and Rainier districts. Approximately 3,000 bushels of excellent seed were produced and it is anticipated there will be more activities in club work in the near future.

This office assisted in judging at the Tilley and Whitla School Fairs. The Duchess School Fair was cancelled due to quarantine regulations. I also judged at the Rainier Horticultural Show; The Lethbridge Seed Fair; The Didsbury and Lacombe Fairs. There were good entries and keen interest shown at all of these fairs.

Field days and picnic parties were held on the Horticultural grounds as noted in the Station report. There has been a noticeable increase of

visitors from all parts of the Province, and considerable time must be spent in this connection by both Mr. Hargrave and myself.

The Horticultural Station located in the centre of the Eastern Irrigation District will greatly assist settlers in planning and selecting hardy varieties of fruit trees for home orchards and to beautify their home grounds and country side.

Inquiries in connection with the various agricultural problems have been heavy during the year and the correspondence has greatly increased and at times we find it rather difficult to cope with, without stenographic assistance.

RED DEER DISTRICT

(F. H. NEWCOMBE)

The spring of 1937 opened with little or no reserve moisture in the soil. The snow fall had not been excessive and would not provide much more than sufficient moisture to germinate the crop. Spring weather generally was dry, and continued so until July, in fact, on July 10th, indications were that little or no crops would be harvested. Subsequent rains, however, increased expectations. Our precipitation records, as taken in the City of Red Deer for the growing months, are as follows:

April	.67
May	2.38
June	3.97
July	10.64
August	5.71
September	5.53
Total	<u>28.90</u>

The seed generally was of strong vitality and emergence was good. Seeding began about April 14, and was general by the 20th. The original crop stand was light, due to moisture conditions, but owing to the July rains, a second growth was produced from the crowns, which resulted in uneven ripening and presented the problem of whether to harvest the first crop, or to wait for the second one to mature. In most cases, the latter course was adopted and as there were no early killing frosts, it proved to be the better policy. Estimated yields are as follows: Wheat 10 bushels; Oats 35 bushels; Barley 28 bushels. Some 70-bushel crops of barley were reported.

Due to the uneven nature of the crops and to harvest rains, grades were low, most of the wheat falling into the 4, 5 and 6 grades. There was some sprouting in the stook and considerable grain was threshed tough. Yields of cultivated and natural grasses were low, although alfalfa made a somewhat better showing due to the second cutting.

STATISTICS

Car Mileage	18,640
Farm visits	820
Office calls	345
Letters sent out	560
Circular letters	500
Bulletins	50
Meetings attended	75

HORSES

The demand for commercial horses of good quality continues to be reasonably strong, though the prices at the Spring sales at Red Deer and Lacombe, were slightly under last year. Considerable interest is evidenced in horse breeding and stallions of good quality are in keen demand. The Red Deer and Lacombe districts are quite well served by good quality stallions, but there is room for some improvement in the outlying parts of this territory, and we are endeavouring to effect improvement organization in these districts. Some districts previously working under the Federal Clubbing Policy, are re-organizing for the purchase of stallions and in this work we are giving what assistance we can.

CATTLE

The breeding and feeding of beef cattle is at a rather low point in this district at present. Past experiences of the feeding lots, have not always been happy. Although the price margin in the winter of 1936-37, was reasonably good, the price of feed grains, particularly Barley, was out of line and long feed was relatively scarce. We would estimate the number of commercial cattle in feed lots at this date, would not greatly exceed half of the number two years ago. While there is no marked reduction in the numbers of beef breeding females at present being kept, there is a definite feeling of dissatisfaction with the returns being received.

DAIRYING

While no mushroom expansion of dairying can be reported, we are of the opinion that there is a steady growth of this phase of the industry. The milk condensing plant at Red Deer, has been operating steadily since its opening, and is undoubtedly a factor in the growth of dairying. We are inclined to believe that the milk at present being condensed, represents for the most part, a diversion of butterfat from the creameries, although the growth already referred to, will doubtless overtake this condition.

Our efforts in so far as beef and dairy cattle are concerned, have been directed towards the promotion of some sort of policy to replace the present haphazard methods. This is essentially an individual problem with each producer and we are endeavouring to give what assistance we can towards systematizing production and improving the quality of the animals and the production. Considerable work remains to be done in the elimination of inferior cattle of both types, and this will be undertaken as opportunity permits.

The fall production of dairy products, was unusually well sustained as a result of excellent fall pasturage.

Some work has been done with regard to the control of warbles, but the extent of the territory makes this a difficult project, and no outstanding success from a community standpoint, has attended our efforts. We are inclined to be of the opinion that while the losses are appreciable, the time is scarcely opportune for extensive work along this line.

SHEEP

There has been no change in the status of sheep breeding in this district during the past season. We do not know of any flocks having been

disposed of, and a few have been established. The growth, however, is slow and will continue to be so under conditions as evidenced by the prices at fall sales. Lacombe sale this year, was one of the poorest in many years.

The winter finishing of commercial sheep and lambs, is, however, definitely on the increase. Many of those who previously fed cattle, have been attracted by the greater returns in recent years with sheep and lambs.

The rape seeded for fall pasture, did exceedingly well and the stubble also provided good picking for the sheep.

SWINE

As predicted last year, sow breedings were definitely lower. Spring farrowed pigs were short fed, owing to the price and scarcity of barley. The swine-barley price relationship being somewhat better this fall, an upward trend is in evidence. The main problems are those of housing, sanitation and general feeding and management, and by individual contact rather than by organized projects, we are endeavouring to assist these problems. We have had some co-operation from the marketing associations, and we are endeavouring to work through them as much as possible.

POULTRY

The interest in this phase of farm production, continues steady. The hatching season was an unsatisfactory one from the standpoint of egg producers, many of whom are not this year mating their flocks.

During the year we have blood-tested about 6,000 birds, and have given culling service in connection with 2,000 more. The turkey crop was good and was marketed at somewhat better prices than last year.

Several new poultry houses have been erected this year, and we have assisted with plans and suggestions.

SOILS

No organized project is being conducted in connection with soils. A great deal of individual work has been done, however, and advice given on cultural and crop methods and the use of fertilizers.

FIELD CROPS

In the cereal division, our efforts have been directed towards the use of better seed. In addition, we have continued as opportunity presented, to direct greater attention to the production of coarse grains in those districts less suited for wheat. Garnet is still the most popular wheat variety, although Red Bobs and Reward are gaining slightly, owing to the grading of Garnet.

There was a definite increase this year in the seeding of cultivated grasses and clovers. The Municipal Districts of Crown, Lorne and Golden West, were organized under the Forage Seed Policy, with a total of 150 farmers receiving seed. Alfalfa and Sweet Clover were most popular. We personally visited each one of these farmers, and discussed with them, seeding, cultivation and general management. In addition to this policy,

large amounts of grass and clover seed were distributed by individuals. We hope to extend this work during the coming season, as well as to follow up last year's seeding. Yields of grass seed were somewhat lower this year, although many farmers had satisfactory stands.

Weed growth was exceptionally pronounced due to early drought. Our principal work in connection with weeds, has been through the Forage Seed Policy referred to above, and we are hopeful that out of this policy, may come more knowledge of crop sequence as a means of weed control.

JUNIOR CLUBS

Junior Swine Clubs were supervised in Rimbey and Lacombe. These clubs were rather weak this year, which may be partly accounted for by the general swine situation. We are, however, inclined to question the advisability of carrying these two clubs further, as we feel they may possibly have outlived their usefulness.

Junior Grain Clubs were operated at Red Deer with 35 members, in barley, at Leslieville with 18 members in oats and at Rimbey with 16 members in oats. While the season was not too favourable for these clubs, many excellent fields were produced and the quality of the work done, was in general much superior to last year. Several barley fields in the Red Deer club yielded 70 bushels per acre. Fifteen of the plots were inspected for registration and certification.

Junior Beef Feeding Clubs were carried on at Red Deer and Lacombe and these experienced a very satisfactory season. For the first time, we believe, in this Province, all of the calves in these two clubs were Hereford breeding. All calves were purchased by the club committee and distributed to the members by lottery. They were fed by the members, under contract, being financed by the Bank of Montreal at Lacombe. The joint sale and fair was held at Red Deer with 48 calves being exhibited and 57 being sold. The Champion calf brought 35 cents per pound, and the average price was 11½ cents, which was a margin of 7 cents over purchase price. The average weight of the finished calves, was 845 lbs. which represented an average gain per calf, of 445 lbs. Prize money paid out, amounted to \$322.00, part of this being a grant from the Alberta Hereford Breeders Association.

These clubs have been re-organized for the season, a total of 80 Angus calves having been distributed to the members. A new club also has been organized in Innisfail, which will co-operate with the Olds club, with Hereford calves secured from the ranges in the south. The Innisfail club is perhaps the largest in the Province, with 47 members.

Judging teams were trained in beef, swine and grain, all three of them winning the elimination contests, but none of them winning the Provincial competition.

The farm camp at Red Deer Exhibition was carried on as usual. Forty boys and 20 girls attended the camp. We also had charge of the farm boys' camp at the Calgary Stampede, in which 40 boys were enrolled.

A two-day short course in Agriculture was held at Sylvan Lake. The roads were bad and the average attendance was about 40. At a similar course held in Dickson, the average attendance was 75.

Approximately seven weeks were spent in leave of absence for sickness.

The territory allotted this office is definitely too large for efficient service; however, we are pleased to report increasing patronage from farmers in the district.

STETTLER DISTRICT

(B. J. WHITBREAD)

Two years incumbency in this office and territory, convinces one that the entire area is striving toward quality production in all lines of farming.

MEETINGS

A definite programme has been followed whereby every community has been invited to co-operate in Agricultural discussion meetings. These have several Classifications: Agricultural Associations, of which there are now seven, and which prove to be the most active agency for knowledge of progressive agricultural practices; Social and political group meetings; executives of these have offered time on their programmes for discussion of agricultural problems; Junior grain and live stock clubs; Municipal meetings; Winter and Summer short courses; Field days and Agricultural Fairs; all have given opportunity to encourage farmers to interest themselves in the services provided through this office. Meetings attended and addressed throughout the year, average about seven per month.

HORSES

The promotion of Co-operative Purchase of stallions by farmers, is a large part of the winter work of this office. It entails addressing meetings, outlining the co-operative plan, individual visiting to assist membership, and supervising organization of executives. Two Percheron Stallions were clubbed in this area this year and one private purchase assisted with. In co-operation with the Veterinary Branch, Edmonton, two colt shows were held during July, each well attended and evincing considerable interest in horse raising. A visitation, by request of the Minister, to all grade stallion owners, was undertaken, and 18 confidential reports made on type of horse illegally used, together with attitude of the owner toward better horse breeding. Assistance was given from this office, with the first horse sale to be held in Stettler, of the Eastern Alberta Livestock Marketing Association. About 70 horses went through the sale.

CATTLE

The cattle situation throughout this area, is little changed from a year ago, with respect to the number milked and raised on the farms. There is, however, considerable interest in the acquiring of pure-bred bulls of the three beef breeds, particularly Shorthorn. During the past season, about 20 bulls have been clubbed under the Federal Loan Policy, this activity being sponsored largely by Agricultural Association members. Latter year marketings of cattle of inferior quality, have done much to eliminate

the scrub bull. Milking was more extensive this year, due to higher cream prices, and will continue to be popular so long as grain yields and prices continue to be low.

SWINE

Swine raising received a severe check this season, due to the scarcity of grain and its high prices, together with lower prices for bacon hogs. It was particularly apparent in those districts where junior swine clubs had been carried on. There was retained a minimum of good sows for breeding and all Government owned boars are remaining in their original districts. Good crops of oats and barley are to some extent inducing an increase in hog raising. The same high quality of bacon type continues to be raised. Many large producers of hogs stopped production this year, awaiting lower grain prices.

SHEEP

Throughout the sparsely settled sections of this area, sheep again proved satisfactory from the standpoint of the class of feed consumed and prices obtained for lambs. There is still opportunity for more small farm flocks, but there exists a general lack of knowledge of sheep raising. The several pure-bred flocks of Hampshire and Suffolk sheep in the area, realized only fair prices at the local fairs, but sold some ram lambs for export to the United States, at satisfactory premiums.

POULTRY

The highest type of poultry endeavour in this area, is that carried on with the culled and blood-tested flocks. This was not a good year in so far as the producer was concerned and those less experienced, have dropped out of this type of egg production. Scarcity of feed has affected the total numbers of poultry kept in this territory. Turkey raising has been on a slightly more extensive scale this year and seems to lend itself to range feeding of poults better than does fowl raising. Approximately 5,000 hens and pullets have been blood-tested this fall, in preparation for the hatchery season of 1938. The utility breeds are most generally raised, although prices for live and dressed fowl, have been disappointing. Several R.O.P. flocks are carrying on with their flocks reduced in numbers.

CEREAL CROPS

The Western section of this area, finds itself with plenty of feed both grain and roughage. For the most part, all of the area has sufficient long feed, although much of it is of inferior quality. Wheat was the most disappointing of all crops grown this year, in that rain being late, weeds grew while the wheat smothered, it being too far ripened to continue growth. Only late sown crops approximated average yields. Threshing yields of wheat varied from 3 to 12 bushels per acre and graded 2 to 4 Northern. About 40 per cent of the area sown to wheat, was cut for the feed available in the form of weeds. Oats gave yields of from 25 to 60 bushels per acre and provided a straw of excellent feed value. Barley yields were from 15 to 50 bushels, some fields being the best harvested in many years. The whole cereal crop situation was greatly enhanced by the lateness of fall frost.

WEEDS

Weeds were more in evidence in crop this season than for many years. The fields were infested almost entirely by Lambs Quarters in the North Western section of this area, and with Russian Thistle in the Eastern Southern portion. While neither of these weeds are ideal roughage for stock, they have this year been made to supply a large quantity of feed. Where these weeds were put up slightly wilted, well tramped and salted, they are proving a quite palatable and acceptable feed for cattle. For the most part, the weeds were this year prevented from polluting the land with seed by being cut green for feed.

FORAGE CROPS

Native Hay crops were light in yield, most roughage available is straw and weedy crop cut green. Tame hay crops were light, old fields making less than a half-ton of hay per acre, new fields yielding about a ton. Seed crops of grass were light in yield, and weight per measured bushel. Forage crops are coming to be more important as the necessity for feed, stoppage of soil drift and control of weeds, become more evident. About 400 lbs. of Alfalfa seed and 500 lbs. of Crested Wheat grass seed were given to members of the Agricultural Association this year, in 3 lb. samples, for seeding, as an experiment in growing forage crops in rows, for seed to be used to increase acreages on their own farms. Despite the unfavourable seeding season, sufficient seed grew, to give impetus to forage crop growing in the respective localities. Through the three-way co-operative policy of forage crop seed distribution, about 600 lbs. each, of Brome and Alfalfa were distributed in the Stettler-Erskine area, and some 200 lbs. of Crested Wheat grass. About 50 per cent was successfully sown. There is considerable interest in Crested Wheat Grass seed growing within this area, with satisfactory remunerative returns to the growers.

JUNIOR CLUBS

There were 11 Junior Grain Clubs that completed their summer programme, with a total membership of 175. Three were new clubs. Three Swine Clubs were organized and two Fairs held; total exhibitors, 19. One Beef Feeding Calf Club completed its programme, with 19 members showing calves at the Fair. An auction was held and the top price realized was 18 cents per pound for a Shorthorn calf.

Every member of a Junior Club was visited and all projects were inspected. Every Grain Club held three meetings during the summer. Trips were arranged in some cases, and juniors congregated at Illustration Farm and Experimental Farm Field Days.

INSECTS

Grasshoppers were not as troublesome as anticipated, and did not extend into new territory to any extent. Where numerous, an effective poisoning campaign was undertaken. Sawfly damage was less noticeable, due to short wheat crop and extent of weed pollution. Sugar Beet Web Worm did some late damage to gardens. Cutworm and Wireworm damage in Spring was slight.

Activities of an Agricultural character, pointing to a generally improved interest in farming were to be observed in the large attendances at Illustration Farm Field Days, Agricultural Association sponsored Community picnics, and Colt Shows. There is every indication that farmers are ready to accept and try out any, and all, new methods for quality production. There is every evidence that the Provincial Department of Agriculture's extension activities are appreciated. Large districts make individual attention difficult, but the steadily increasing correspondence from farmers, indicates that this service is becoming more generally known each year. With the return of crop yield and a building up of feed supplies, there will be a greatly increased stock production; a type of farming that a large part of this area is undoubtedly best suited for. The carrying on of the field activities of the various branches of the Department of Agriculture, together with strictly local problems and contacts, makes for the continued importance of District Agriculturist endeavour in this area.

CAMROSE DISTRICT

(H. W. SCOTT)

Threshing was completed early in the fall of 1936 and a considerable amount of fall ploughing was done. The spring of 1937 opened early. The snow covering was light and the land was in suitable condition for seeding at least two weeks earlier than usual. Spring showers were frequent and germination was satisfactory. Pastures made rapid growth. Hot dry winds and lack of rainfall from the middle of June to the middle of July rapidly reduced crop prospects. Generally the black soil zone received showers the latter part of June and was able to withstand the heat and produced a good crop. Yields of from 40 to 50 bushels of wheat and from 80 to 100 bushels of oats were not uncommon. Over a considerable portion of this area hail damage was severe and many did not thresh any wheat and only a small amount of coarse grains. Generally the district East and South-East from Camrose did not receive these late June rains. The ground was parched and the early seeded wheat received a set-back from which it never recovered. Good rains varying in amount from 6 inches at Camrose to 2 inches in the Eastern part of the Province covered the entire district about the middle of July. From then on growth was rapid. Lamb's Quarter, Russian Thistle and other weeds took the place of wheat in those areas where the drought had done so much damage. Sufficient rough feed for a limited number of live stock is available on practically all farms. There was a heavy marketing of live stock from the drier part of the district during the late summer and early fall and at the present time there are fewer live stock on farms in that area than for possibly 20 years. Milk-ing cows were retained where possible. Grasshoppers were active in crops from the Eastern boundary of the Province West as far as Hughenden and in small areas West and North of this point. The rainfall during August, September and October was above normal all over the district and during this period, at Lacombe, the precipitation records indicate the heaviest rainfall recorded at the Station in 30 years. In the black soil zone there is a considerable reserve of subsoil moisture and further East some little reserve.

The relative carrying capacity of the Brown and Dark Brown Soil Zones as compared with the black soil zone, at the present time, is brought out in the report of the Live Stock Marketings from crop districts seven and eight. These crop districts are adjacent to each other, comparable in size and cover the area from township 34, North for about 100 miles and extend West from range 1 West of the 4th Meridian to the 5th Meridian. Crop district 7, largely in the brown soil zone comprises roughly the area East of a line drawn from Endiang to Bruce and is crossed by the Canadian Pacific lines running East from Daysland and Halkirk and by the Canadian National Railway running East from Bruce. Crop district 8, extending West from this line, is largely in the black soil zone and is served by the Canadian Pacific Railway from Innisfail to Millett and the Canadian National lines which run through Camrose. During the period from January 1 to October 31 in 1937 crop district 7 marketed only 23.9% as many hogs, 25.1% as many sheep and lambs, 55.2% as many veal calves and 59.1% as many head of cattle as did crop district 8. The yield of grain in crop district 7 would not be over 30% of the yield in crop district 8, if that high. This shows the effect of the drouth in crop district 7 and the reduction in quantity of saleable products from farms. With the increased effort to conserve moisture by summer fallow the fibre is being worked out of the land and soil drifting is an acute immediate problem.

HORSES

For some time there has been a surplus of horses in the district and these have been moving regularly to the Eastern markets. The heavy marketing of work horses from the drought area of Alberta and Saskatchewan has temporarily flooded the Eastern market but it is expected that when this surplus is disposed of regular marketing of horses at satisfactory prices may be resumed. From the Lougheed-Sedgewick area, where a Federal Horse Club has been in continuous operation for a number of years, some horses were selected for shipment to Scotland. This office was instrumental in interesting a number of groups of farmers in purchasing stallions through the Provincial Stallion Purchase Plan.

CATTLE

Dairy cattle are an important source of income in the black soil zone and to quite an extent throughout the whole area. The heavy rains during the latter part of the summer and the long frost free period in the fall extended the green pasture period and this, we believe, was the chief cause of the increase in butterfat production, which amounted to possibly ten per cent throughout the area. There is a growing tendency to dispose of the grade bull calves from the dairy cows at birth or as veal. The dearth of good dairy bulls from known productive ancestors, is realized and there has been some discussion about the possibility of organizing groups of farmers to purchase bulls under a plan somewhat similar to that used in the purchase of stallions. Some bulls have been purchased by two or more farmers but so far no assistance has been asked from the Government, though this office has assisted the buyers in making the selections. A few farmers are keeping production records but the number so doing is not in keeping with the importance of the work. Most pastures are decidedly over-grazed, but there is a growing interest in Forage Crops as such and

for adding fibre to land that has been under cultivation for some years. In the black soil zone the distinctly dairy breeds predominate and in the balance of the district the milking strain of Shorthorn is most in evidence except in cases where fluid milk is sold direct to the consumers. Where feed was on hand the finishing of market cattle in the 1936-37 season was profitable. More farmers and juniors are fitting and exhibiting at the Edmonton and Calgary Spring Shows and the bulls that are going forward to the Sales are of better type and finish than was the case a few years ago. More feeders are holding and continuing feeding cattle on their farms after spring work commences. There were not as many cattle bought to go on feed this fall and winter as last year as the outlook for profitable feeding was not bright. Owing to the shortage of grain a number of farmers who generally market their surplus as Baby Beef will carry them over and market off grass or finish them next winter depending on feed conditions.

HOGS

Over a period of years more money is made in feeding hogs than in the marketing of coarse grains for cash. There is a definite trend towards feeding tankage to hogs when sufficient skim milk is not available. During the life of the "Ottawa Agreement" the hog producer feels that he can safely continue to breed sows but in the area affected by drought breeding operations are curtailed until there is some feed ahead. It is the practice of this office to stress sanitation and the improving of the type of hogs, the lowering of the cost of production, the encouraging of marketing on a rail grading basis. When a producer breeds sows he is figuring on a feed crop. If the crop does not materialize a market must be found for the young pigs and this office has been able to bring a number of farmers with surplus pigs in touch with the farmer with surplus feed.

POULTRY

The members of the various Accredited Flock Groups purchased about the usual number of chicks but generally there were not as many baby chicks purchased last spring and of these a good many were secured rather late in the season. The market period for hatching eggs was not as long and for some reason the fertility of the eggs was a little below average. There was a slight reduction in the number of birds selected and blood-tested this fall but those with fair-sized flocks of good quality are still depending on poultry for a considerable amount of income throughout the year and are maintaining the size of their flocks. The sod poultry house is quite popular and a number of new ones were erected this year. Last year about 160,000 dressed turkeys were assembled and shipped from Camrose. This year the numbers have not been quite so large but if anything the quality of the birds assembled was a little better.

FORAGE CROPS

Among the problems confronting the farmer is the production of sufficient feed for horses, cattle and sheep, the control of weeds, and the maintenance of soil fibre. The number of live stock that can be maintained on the farm is determined by the carrying capacity of pasture land and the quantity of feed available through the winter and spring months. On prac-

tically all farms pastures are over-grazed, whether arable land seeded down or native pastures. Often the stand is not what it should be and weeds form a large part of the growth. Hay meadows do not receive the attention that they should to get the best yields. Varieties of forage crops used have frequently not been the most suitable to the conditions and seed mixtures have not been those that have proved to give the best results. There has been an increasing demand for definite information as to the best method of procedure to improve these conditions and this office has considered this one of the major problems calling for attention during the year. The Forage Crop Seed Distribution Policy has been used as far as it was available and grass and clover seed went out under it to Evergreen, Sterling and Asquith Municipalities as follows: Alfalfa, 2,700 pounds; Brome, 2,000 pounds; Crested Wheat Grass, 2,000 pounds; White Sweet Clover, 1,700 pounds; Altaswede, 450 pounds; Alsike, 540 pounds; Timothy, 600 pounds. In addition to this over 200 farmers came into this office to discuss seed mixtures for forage crops. These farmers then purchased from local seed stores or from growers who had seed cleaned at the Seed Cleaning Plant in Camrose 2,250 pounds of White Sweet Clover, 1,400 pounds of Brome, 750 pounds of Timothy, 550 pounds of Alfalfa, 525 pounds of Crested Wheat Grass, 560 pounds of Altaswede, 250 pounds of Alsike and 100 pounds of Slender Wheat Grass.

Under the Prairie Farm Rehabilitation Act four Agricultural Improvement Associations have been organized East of Hardisty with a combined membership of between 550 and 600 farmers and a fifth one is in the process of organization at the present time. Each member of an A.I.A. may secure sufficient grass and clover seed for a seed plot. A good deal of this seed has already been distributed. Some Crested Wheat Grass was seeded in the fall of 1936, a small amount in the spring of 1937 and a considerable quantity in the fall of 1937. Some Brome, Sweet Clover and Alfalfa was also seeded at the same time. Farmers residing in the drier portions of the area are advised to first establish a stubble cover and then to seed directly into the stubble or weed growth, preferably just before the ground freezes up in the fall or if that is not possible then the first thing in the spring, for it is our opinion that by doing so the chances of getting a satisfactory stand are greatly enhanced. Crested Wheat Grass is unquestionably the most satisfactory grass to grow in the drier parts of the district for either hay or pasture. If Alfalfa or Sweet Clover can withstand the drought on the particular piece of land to be seeded, a mixture of from 5 to 7 pounds of Crested Wheat Grass and 2 to 3 pounds of Alfalfa or Sweet Clover seeded as outlined above through every second run of the drill offers possibilities for hay or pasture on many farms where a considerable amount of money has already been spent in a useless effort to get satisfactory hay or pasture established.

From work carried on in this district and elsewhere it is felt that corn seeded annually on the same ground for a number of years will provide considerable fodder. On this land an application of farmyard manure occasionally will increase the prospect of a yield. Spring and fall rye seeded at some time during the year when there is sufficient moisture in the soil to ensure germination and reasonable growth will supply a certain amount of feed and this stubble will make a foundation into which the grass and clover seed may be sown without much fear of soil drifting. A thin stand of Sweet Clover may be improved by seeding spring rye directly

into the clover stand. This mixture makes good feed for livestock. In the area where rainfall is not so limited oats could be used rather than rye to increase forage yield.

P.F.R.A. ACTIVITIES

Projects undertaken in this district under the P.F.R.A. are under the supervision of the staff of the Dominion Experimental Farm at Scott, Saskatchewan and this office. Some of the activities are carried on, on the Sub-experimental Station at Metiskow and others on farms in the district. These activities include the improvement of grass land already seeded down, thickening the growth on native prairie land which is sandy, improvement of native hay meadows, getting a stubble cover on sandy farm land and later establishing grass on this land, production of annual feed crops, strip farming, various methods of summerfallow to destroy weeds and maintain a trash cover or lumpy soil condition, distribution of sufficient grass and clover seed for seed plots, conservation of the spring run-off water to be used later for stock watering or irrigation, tree planting, and the treatment of fence posts.

As already noted in this report, the present year was the driest in the history of the district in which these P.F.R.A. activities are being conducted. There was no reserve soil moisture and from the middle of June until the middle of July was a rain-free period. Grasshoppers were numerous and active. With this combination of circumstances it was difficult to get much definite information on the results of different practices but the findings from some of the work undertaken are interesting. Where Crested Wheat Grass was seeded in September it was able to make sufficient root growth to withstand the drought and grasshopper attacks and made fairly satisfactory recovery following the late summer and fall rains. The late fall and early spring seeding of grasses and clovers made a uniform stand but the plants had not sufficient root development to recover from the adverse conditions. Brome sod ploughed early in the spring, worked down and packed was completely killed. The application of manure and fertilizer to grass meadows stimulated growth early in the season but the benefit of the treatment was not computable at cutting time. Late fall and early spring seeding gave a little more uniform catch than the September seeding where the grasshopper attack was not so severe. A dozen or more different varieties of grasses and clovers were drilled into a native meadow in the spring, half of the area being disced before seeding, the other half was not touched. This meadow had a fair amount of moisture. The growth made during the season was quite satisfactory and this test will be watched with interest for some years in order to observe the suitability of the different varieties for this kind of meadow improvement. Another test of the same varieties was made on a meadow which contained a concentration of salts. The dry weather aggravated the condition and a number of the varieties did not survive. A spring and fall seeding was also made around the shores of a dry lake. In this case quite a variety of grass and clover seed was mixed together and seeded directly into the native growth. The survival and character of growth of this mixture over a period of years should furnish valuable information.

In establishing a stubble cover over sandy land various methods were used which included seeding rye, and rye and barley directly into the weed growth, cultivation with a duckfoot cultivator and seeding at once, seeding

with a tiller combine, running the tiller combine over the ground lightly and seeding with the ordinary grain drill immediately after, and seeding with the Demster Seeder. Where the surface of the ground was not worked in some way the weed growth was much more vigorous. Had there not been so much wind and drifting the area seeded with the Demster would be quite uneven for seeding down permanently to grass. For an annual feed crop, oats, barley, rye, wheat, corn, sunflowers, millet, peas and sweet clover were seeded. All made a satisfactory stand but without exception everything was eaten off by the grasshoppers.

Under strip farming a two-year and a three-year rotation was set up and the comparative yields and suitability of each will be watched with interest by the farmers in the district. Quite a number of applications have been made for a survey of farms with the object of collecting the spring run-off water to be used later for stock watering and small irrigation projects. Some of these surveys have been made and the projects completed. Others are on the way towards completion and a number of farmers are still waiting for survey. Many applications have been made for trees and the supply will be going out as soon as the farmers' land is in proper condition. Two field days were held in the district, one on the Sub-Experimental Station and one on the Sidey ranch at Cousins and a number of interesting meetings were held by the Agricultural Improvement Associations during the year. These gatherings which were well attended gave representatives from the University of Alberta, the Dominion and the Provincial Departments of Agriculture an opportunity to meet the farmers and discuss their local problems.

JUNIOR ACTIVITIES

Eleven School Fairs were held in the district this year. Fourteen Grain Clubs carried through their regular programme of meetings and contests. A feature of the club work that was of particular interest to the members was the day spent at the School of Agriculture at Vermilion. This was the first time that most of approximately 300 young people who went from this district had ever seen one of the Agricultural Schools. They thoroughly enjoyed the day although it was a long drive for most of them. One of the results of the day spent at the School was that later on a number registered for the regular course at either Olds or Vermilion. The activities of two Swine Clubs were supervised. There are no Beef Calf Clubs, as such, in this district but ever since the Junior Classes were opened at the Edmonton and Calgary Spring Shows this district has strongly supported these events. The calves are bred, selected and fitted with the idea of competing and selling at one or other of these Spring Shows. A number of those who in previous years exhibited in the Junior Classes are now regular exhibitors in the Open Classes. Most of the fat stock go to Edmonton unless the parents are sending bulls to the Calgary Bull Sale in which case the animals go South. This year a few of the best calves in the Junior and Open Classes at Calgary came from this district. At Edmonton twenty-four calves were shown in the Junior Classes and twenty-six entries were made in the Open Classes.

This office supervised the Boys' and Girls' Camp held in connection with the Camrose Fair on July 5 to 7. The forty-seven boys and twenty-seven girls in attendance were housed at the Lutheran College. Miss

Magera and Mrs. Nisson had charge of the classes with the girls which were held in the Normal School. A new feature in the girls' program, a talk from one of the Medical Doctors in town, was appreciated. A good many of the boys who attended the Camp came from farms where dairying is an important feature and this year more attention was given to matters in connection with dairy farming than was the case at former Camps in this district. The assistance of B. J. Whitbread, District Agriculturist at Stettler, and Mr. C. K. Anderson, Manager of the Creamery at Camrose, was appreciated by this office.

GENERAL

The Seed Drill Survey carried out this year brought out the fact that there is still a good deal of seed put in the ground that is not true to any one variety. The work done last year in connection with this Seed Drill Survey and the assistance given under the Seed Exchange Policy made it possible to bring in two carloads of Certified Red Bobs 222 Wheat. This was distributed from the Cleaning Plant at Camrose. There is an increasing interest in the growing of Red Wing flax and the fact that there is a good local market for flax free from black kernels in Camrose has stimulated interest in this crop. On land reasonably free from weeds flax has given a good account of itself but in the district where the weather was so dry during late June and early July flax was not able to compete with Lamb's Quarters and other weeds after the rain.

Many of the settlers who are moving out of what is now the drought area are endeavoring to locate in the black soil zone and good farm land is at a premium. This office has been called upon to make inspections and report on the suitability of a good many parcels of land for these settlers and later when the settlers arrive we are called upon for advice regarding the probable suitability of different types of farming to the particular requirements of these new settlers. The movement of settlers into this district is reducing the amount of reasonably cheap pasture land and there has been many inquiries at this office regarding methods of improving the carrying capacity of land that is not now growing cultivated crops. In order to get more information on the subject Dr. S. E. Clarke of the Experimental Station at Swift Current, Dr. F. A. Wyatt, Professor of Soils at the University of Alberta, and myself spent some days in the district looking into a number of these problems and our report has gone to the Provincial and Dominion Departments of Agriculture. The Daysland Drainage Board have been granted permission to allow any in the drainage scheme in that area to erect dams to utilize the run-off water to flood meadows and farm lands provided they, in doing so, do not flood land of another farmer in the area. There is a possibility of water utilization in the drainage schemes of this district that has not yet received sufficient attention, this it should get in the near future. The utilization of spring run-off water has considerable possibilities in areas where it can be used. We believe there is a possibility of improving the quality of the present growth on dry lakes and extensive lake shores. Most of the grass at present growing on this kind of land will not stand close pasturing and many meadows which formerly grew a fair quantity of feed are producing practically nothing now because of being pastured. Extensive areas high in salts that up to the present have not been considered as reasonably good farming land might be improved with the growing of intruced varieties of

salt resistant grasses and legumes. There is also a considerable area of fairly good black soil that has so many stones on it that it is suitable only for pasture. This land has been closely grazed and it might be possible to increase its carrying capacity by seeding, without cultivation, late in the fall or early in the spring to approved grass and clover mixtures. The facilities of the Alberta Grain and Seed Cleaning Plant at Camrose are appreciated by a widening circle of farmers, particularly those who have flax, grass and clover seeds to clean either for sale or for their own use.

THORSBY DISTRICT

(P. WYLLIE)

Appointment was made in December, 1936, to this office, with the writer stationed at Leduc, from January 4th to November 13th. For the balance of the year this office has been located at Thorsby. Some work had been done in previous years in the eastern part of the territory with Junior clubs, etc., around Leduc, Millet and Wetaskiwin. In the more westerly portion of the territory little work had been done. Throughout this part of my territory much of the work carried on was confined, chiefly to making contacts, lining up various projects suitable to the district, and becoming more familiar with the particular problems of farmers in the gray wooded soil areas. Throughout the whole territory farmers appear to appreciate the services of the District Agriculturist, and so far, have given fine support to all work undertaken during the past season.

The winter of 1936-37 was one of very light snowfall; spring operations on the land were started early and completed in record time. Soil moisture conditions were below the average of the previous seasons. Unfortunately the severe dry spell which followed had a serious effect upon the subsequent yields of grain. During the month of June and the early part of July, a serious pasture problem developed and many farmers were considering selling much of their livestock.

Heavy rains on and after July 14th relieved the pasture problem, but were too late to improve the wheat crops. Coarse grains benefited by these late rains. Wheat yields varied considerably throughout the district. The average yield being about ten to twelve bushels per acre. The heavy second growth appearing in the coarse grain crops improved the yields, and provided an abundance of rough feed for live stock. A considerable quantity of straw and green feed has been baled and sold for shipment to drought areas.

Harvesting and threshing were delayed by intermittent rains, and as a result lowered the grade of grain. On the whole, the season finished up with a more prosperous outlook for the farmers. Grain prices were reasonably attractive and much of the wheat sold. Movement of coarse grains has been limited, probably due to the fact that farmers are retaining a considerable quantity on the farm to feed to live stock during the winter and to provide a supply of feed for next season's operations.

HORSES

Assistance has been given wherever possible in the formation of Stallion clubs in the territory. One new club was formed in the Conjuring Creek district last spring, and some work done toward the forming of two clubs during the coming year. The Co-operative Purchasing Plan, sponsored by the Provincial Department of Agriculture, appeals to farmers in many districts. We hope to give further aid in establishing clubs of this type. Altogether, we know of four Stallion Clubs in the territory, one Federal Club, and three groups under the Co-operative Purchasing Plan.

CATTLE

While some outstanding purebred herds, both Dairy and Beef are to be found around Leduc, Millet and Wetaskiwin, yet, in the balance of the territory the quality of cattle raised is very poor. It would appear that farmers are not as interested in raising cattle as they are in raising other kinds of live stock. In the more outlying districts a lack of finances prevents the purchase of good type sires of any breed. If some assistance could be given toward the purchase of suitable sires, it would bring about a decided improvement in the quality of cattle raised in the newer settlements.

SWINE

The quality of hogs found in this district compares very favourably with those of other districts in the Province. Much improvement has been accomplished during the past ten years through Swine Clubs and other improvement policies. The Liberty Swine Club in particular, has given much assistance in the distribution of good quality breeding stock. The Federal Department of Agriculture's policy of loaning boars to Swine Clubs and donating purebred sires to swine improvement groups formed under the Sow Distribution Policy is a strong factor in improving the quality of hogs. Aid has been given to a number of farmers in locating sires and breeding gilts. There has been a strong demand for breeding stock this fall.

POULTRY

Poultry, along with dairying, continues to occupy a popular place on the majority of farms as a source of revenue from week to week. A number of the more enthusiastic poultrymen with a view to taking advantage of the premium prices paid by Hatcheries, applied to have their flocks blood-tested. Poultry work has been confined, chiefly to the blood testing of twenty-four farmers' flocks of about 3,300 birds. A number of requests have come to this office for Turkey breeding stock. Prices for dressed poultry were slightly higher than last year.

CROPS

The results obtained through the Seed Drill Survey conducted last spring would indicate that some improvement is needed in the type and purity of seed used on many farms. Sixty per cent of the seed drill samples were classed as badly mixed and unsuitable for seed purposes. The same survey has also shown that many weed seeds are being sown with the grain, and thereby intensifying the weed problem.

Perennial weeds, namely Sow and Canada Thistle, along with Wild Oats are becoming a serious problem on many farms. Some steps should be taken to prevent these perennial weeds from going to seed, or prevent farmers from threshing fields that are badly infested. A number of farmers realize the value of forage crops as an aid in controlling weeds, and have taken advantage of the assistance given towards the purchase of forage crop seed.

FORAGE CROPS

There has been a decided increase in acreage sown to forage crops during the past season. The Municipalities of Liberty, and Pioneer, in co-operation with the Dominion and Provincial Governments, distributed over 6,400 pounds of various kinds of forage crop seeds under the Forage Crop Plan in 1937. Eighty farmers in Pioneer and sixty-four farmers in the Liberty municipality received seed under this plan. Due to extremely dry conditions prevailing during months of May and June, about 35 per cent of these farmers did not sow the seed received under the plan. About fifty per cent of the balance obtained reasonably good stands in spite of the unfavourable moisture conditions. Assistance was given from this office in the distribution of this seed. A number of farmers in Local Improvement districts were assisted under the same policy. This area is well suited to the production of forage crops and forage crop seed, and much work is being done in this particular field.

JUNIOR CLUBS

Three Junior clubs are supervised from this office. Two Swine and one Grain club. Number of members in clubs:

Liberty Swine	17 Members
Pioneer Swine	15 Members
Leduc Grain	19 Members

A full programme was followed with all clubs, consisting of: A spring meeting; three meetings at which members received instruction in judging; one Field Day at the University of Alberta; and their fall fair. Interest in all clubs is keen, with all members taking an active part in the work.

Two teams, grain and swine, were selected, coached and taken to Edmonton to compete in their respective projects at the Provincial finals held at Edmonton in October. Howard Fulcher and Robert Ferguson, the team representing the Liberty Swine Club at Conjuring Creek were successful in winning the competition in Swine Club work. These two young men were given further training before leaving for Toronto. At Toronto they won first place in the Dominion finals.

In order to assist in the distribution of breeding gilts, farmers were advised to attend Swine club fairs and purchase some of the good gilts. At the Liberty Swine Club Fair, eight type breeding gilts were sold to farmers in the community, instead of sending them to the plants. In this way Swine Clubs are doing a valuable piece of work, in improving the quality of our hogs.

MISCELLANEOUS

Some time was devoted to organization of short courses and general field days. One short course was held in the spring at Valley View, with about forty farmers attending. Three Field Days were sponsored and held at the following points: Falun, a general field day with Mr. De Long and Mr. Newman from Lacombe as speakers. About 150 people attended this meeting; Dairy field day held at Mr. Campbell's farm, Leduc, under the auspices of the Producers' section of Dairymen's Association, with Mr. H. A. Craig giving the demonstrations and talks on dairy cattle and Mr. Buckingham speaking about forage crops. Some fifty farmers and their wives attended this meet; and at Calmar under the auspices of Mr. Perley, creamery manager at this point. A number of speakers were present from the Department and from the University. Estimated attendance at this meet was about 250 people. Those present at these Field Days expressed a wish that they be continued again next year.

Assistance was lent by this office in the Junior work carried on at the Edmonton Spring Show and the Fall Sheep and Swine sale. Five days were spent assisting at the Farm Boys' camp held during Edmonton Exhibition week.

The Vegreville Farm Boys' camp was organized and directed from this office. Sixty-four boys attended this camp and received instruction in handling and judging of live stock and grain. A number of the boys from this camp are now attending the School of Agriculture at Vermilion.

Assistance was given from this office in judging of livestock and poultry at the following School Fairs: Partridge Hill, Ministik Lake, Pendryl, Leduc, Millet, Wetaskiwin, Thorsby and Camrose.

STATISTICS

Car mileage, 11,589. Attended 25 farmers' meetings. Sent out 1,100 letters and notices from this office. Distributed a number of bulletins and plans for hog and poultry houses. No record has been kept of letters received at this office; number of office calls; nor the number of farm calls made during the year.

WILLINGDON—MYRNAM DISTRICT

(FRED MAGERA)

The Willingdon office of the District Agriculturist was closed for a short period prior to my being placed in charge, starting on June 10, 1937. This area was served by Agriculturists for many years and my work consisted of "following-up" the line of activities that had been established.

The weather conditions of this district were the most adverse that have ever been experienced. There was very little soil moisture from the previous year and all through the seeding and growing season, scarcely sufficient rain fell to aid germination and some early growth.

FIELD CROP AND WEEDS

Drought conditions prevailed in Central and Western part of this district, though timely rains somewhat remedied conditions about Myrnam and Derwent, where crops were somewhat more satisfactory. The early Spring favored a heavy infestation of pigweed, that proved most efficient as a deterrent to most cereal crops. Wheat and early barley specially suffered from these adverse conditions. Rains about harvest time, revived coarse grain crops, resulting in a heavy second-growth, giving what was termed a "two-ply" crop. This later growth produced a sufficient supply of feed, seed grain and long feed, that will be more than is necessary to satisfy the quota for wintering of livestock and carrying on Spring work. A sufficient supply of seed grain is in store for the coming year.

The most serious weed problem is with wild oats. In the Western and Central portion, this will remain the biggest problem to combat in order to make crop production more remunerative. A heavy toll of soil moisture is annually lost through a heavy pollution with this weed. Much needs be done to introduce practical control methods that would eliminate this hazard.

This district has been well advised in the introduction of forage crops. There are many stands of brome with a lesser number of Alfalfa plots. Two Municipal Districts were aligned to take advantage of the Dominion-Provincial Government Policy for the Distribution of Forage Crop Seed. A certain amount of "spade-work" was done to initiate growing of some adaptable mixtures to provide hay and pasture. Very little forage crop seed is as yet produced.

Many soil types are evident along the course of the North Saskatchewan River. There are no major soil problems to be faced as yet. The problem of conserving soil moisture by judicious eradication of weeds and cultivation, well deserves much attention. Soil analysis were arranged, and an experimental plot started in collaboration with Mr. Wilson, Agronomist at Vermilion School of Agriculture, to determine what may be grown on the flats at Hairy Hill and Myrnam, where some toxic agent is present.

A very valuable contribution is being made by the Crop Testing Plan Programme. Field Days at Hairy Hill, Vegreville, Mundare and Lamont, were held. A number of firms arranged for Disc Tiller Demonstrations which were well attended and observations noted, as very few of these implements are used in this district. A visit was paid to St. Paul Illustration Station Field Day, to help with judging of grain and horses.

An outstanding contribution toward cereal crop improvement, is being made by the Junior Grain Club Movement. The Clubs have introduced a uniformity of varieties adaptable to the district, that are very striking. Much has been accomplished to train Junior Farmers. Wheat Clubs were carried on at Lamont and Myrnam. Oat Clubs at Andrew, Willingdon and Myrnam and Barley Clubs at Willingdon and Andrew. The regular Field Days and Seed Fairs were held, and training given to judging teams. Encouragement was given to exhibits at Toronto and Chicago, where Club members took many awards. Mr. J. W. Lastiwka of Willingdon, winning first in oats and barley. In the open class in oats at Chicago, Mr. George Topolniski

of Sniatyn took first. As a culmination to this achievement, a re-union of original and recent Club members was arranged with Mr. William N. Pidruchney of Smoky Lake, as guest speaker. The many years of persistent encouragement and training are beginning to manifest themselves in increased pride in doing something well.

LIVE STOCK IMPROVEMENTS

Live stock on a small scale is general throughout the district. The size of the herd or flock being governed by domestic needs and the size of the farm. A little of everything is kept, so that marked improvements are not as noticeable as with more specialized breeders. There seems to be a sufficient supply of rough land along the Saskatchewan River, to suggest permanence in live stock production. The state of live stock merits much effort to improve type and especially to introduce a planned programme of a longer duration as much reversion is evident. The use of better sires, is being followed, but breed types are not strictly adhered to.

The Horse Improvement Policy, is on the road to most certain and permanent improvement of all live stock. Almost throughout the whole district, the Percheron breed is invariably the rule, and this plan is keenly followed and gaining momentum. Former district agents have organized many Stallion Groups, under the Co-operative Purchasing Plan. A number of these groups are in the fifth breeding year, necessitating the exchange of stallions. Throughout the length and breadth of the district, there are interspersed group stallions, providing very economical breeding services and an organization among the farmers that functions very efficiently to make the farmers better-horse minded. There is room for the placing of a large number of additional stallions to eliminate the "Grades" that are prevalent in some districts. Organization meetings have been held at Slawa, Brier Field, Myrnam and Royal Park. Requests and arrangements for organizing groups at Hiway, Bohdan, Sich-Kolomaya and Northern Valley, have been attended to for some time later in the season. A large number of individual calls were made to owners and caretakers of stallions. Field Days at the University of Alberta and Vermilion, were attended.

A special feature in this work, was the purchase of Konzeur, a U. S. A. bred, two-year-old, for the Willingdon (north) Group. This horse was later chosen to represent Alberta's two-year-olds at the Royal.

A number of meetings were held in anticipation of organizing a Filly Club to purchase foundation females to establish local breeders of better Percherons. Much correspondence of a local nature was done. A prolonged correspondence with a Horse Improvement Association in Ohio, was carried on in regard to progress achieved in that Club. An ever increasing number of farmers have shown interest in this scheme and it is hoped to place purebred females with many farmers in the coming years, to provide a supply of sires from more local sources. This office gave assistance in selection, to prospective purchasers of stallions. In case of urgent need, advice was given to help suffering animals. A very marked need for a Veterinary Surgeon is continually being experienced.

CATTLE

The cattle of this area, are of many breeds and crosses. There is much Shorthorn blood evident. A large number of nuclei-breeders are be-

ginning to assert themselves. Most of these are former Calf Club members, that now satisfy a portion of the demand for bulls. This office has assisted them in finding sale-contacts for a number of these calves. The Dominion Bulls are slowly being withdrawn and a need for sires is being felt, where these bulls were used. The registration of more cattle is evidence of the more interest being shown in breeding of purebreds.

SWINE

The Swine population seemed doomed for imminent reduction as the feed situation became critical during the summer months. Later, as more feed was certain, than was anticipated, a more healthy outlook prevailed and keener interest in breeding stock manifested itself in the number of requests for pure-bred gilts and boars. Assistance was given to these in the selection of stock, and a centre of Lacombe-bred Yorkshires was started at Shandro, introducing some Swedish blood. An inspection of sows, placed by the Dominion Distribution Policy, was also followed up.

Swine Club work was carried on at Myrnam and Northern Valley. The latter Club showed marked community effort to give permanence to production of the desired type of hog. Proper feeding and management is being realized as an inevitable solution for profitable production. This office has done considerable work to further this necessary training. A special emphasis need be placed, to establish breeders to supply the large local market for improved breeding stock, so as to offset the nondescript tendency.

SHEEP

Sheep are raised mostly to supply the home requirements of wool, for spinning into yarn to make the many-colored "Kovertz" that are so popular in many of the homes. Some surplus wool is shipped out to be made into blankets. Before the Fall breeding season, assistance was rendered in the selection of rams.

POULTRY

No noted plan is evident in poultry raising. Chickens are kept on all farms, but no special effort toward specialized production, is attempted, except in the vicinity of Vegreville, where a few of the farmers have fair-sized flocks and supply eggs to the hatcheries. Turkeys are becoming more popular and more interest is shown. A number of breeders are producing better breeding stock. A pen of one Tom and three hens, was procured from the Provincial Poultry Plant, for an interested farmer. Ducks and especially geese, are an institution with the Ukranian farmers and are invariably raised to supply the demand for feathers, that is difficult to satiate. More than six weeks time was spent in blood-testing in and out of the district. A number of farmers are being lined up to procure chicks at the proper time and later to act as key poultrymen, to introduce better methods in needy districts.

MISCELLANEOUS

Bee-keeping is becoming very popular. About 173 farmers keeping bees, are on record in this office. Quite a number have not been contacted. From pre-season interest shown, it appears that about twenty-five per

cent increase is shown in the number of beekeepers that may be anticipated for the coming year. An ever-increasing demand for information and attention, is coming to the office, and many calls have to be made to help in seasonal problems. Beekeepers' Field Days, were held at Mundare, Willingdon and Royal Park, with Mr. S. O. Hillerud, Provincial Apiarist, in attendance. Field Day programmes were requested at many centers, but time was not available. Preparatory plans are being arranged for a Short Course of two-day duration. Due to dry weather conditions, the honey crop was only about fifty to sixty per cent of the 1936 production. There is an ever increasing number of farmsteads planting fruit trees and shrubbery, and bees are usually included in conjunction with this development. There are a few orchard plantings, but many need reconditioning, to include more recent developments, especially in apples and some small fruits. There appears to be an ever more pronounced need for some systematic supervised program, to help introduce and establish, more recent horticultural practices to include the many potential farmerettes, along the line of Junior Grain Clubs for boys. It is hoped to experiment with such shrub work, at Northern Valley, where the idea has been well received.

Besides the regular routine office work, considerable time was also devoted to getting boys for the Boys' Camp at the Edmonton Exhibition and students for the Vermilion School of Agriculture. A number of A. T. A. meetings were attended to help in organization work of two prospective school fairs. During the latter part of the year, many requests were received to assist in the Youth Training Program.

Since this was for me a new type of work that requires the co-operation of the people of the district, some time had to be devoted to establishing the goodwill that this Department merits.

ST. PAUL DISTRICT

(J. M. FONTAINE)

The spring of 1937 has been the earliest since 1934. Spring plowing and general preparation for seeding were in evidence by the 18th of April and seeding in full swing by the 29th of the month. Generally speaking the spring weather was rather dry, which had an adverse effect on the germination of early seeded crops. The first real good rain which benefited the crops, principally the late seeded, fell over the district on June the 22nd.

Consequently, pastures and hay meadows both wild and cultivated (tame) were rather poor in the earlier part of the season, although the precipitation over this district was 13.32 inches. The most of it fell during July and August. I must state that Smut Clover and Alfalfa crops were exceptionally good, especially the second growth. Said crops kept for seed, yielding very highly. Wild hay meadows due to lack of moisture in the early part of the season produced only half crops compared to 1936. We had only .42 inches of rain in September and October. This leaves a deficient quantity of moisture in the subsoil for the spring of 1938.

The average yield of cereals in the district adjacent to St. Paul was as follows: Wheat 10, Oats 30, and Barley 23. The Bonnyville district was more fortunate and we can easily add 12 bushels to the acre in wheat, 10 in oats and 7 in barley.

Due to the fact that I undertook the work of district agriculturist in April I did not have time to organize my work and do as much as I would have liked to.

LIVE STOCK MARKETING IMPROVEMENT

One detail which I believe is worthwhile mentioning is that during my leave of absence which was granted me in the fall of 1936 for the sole purpose of devoting all my time to the organization of a Live Stock co-operative, we have succeeded in laying down the foundations of a Live Stock Co-operation Shipping Association. I feel confident it will survive the struggles and false propaganda unavoidable every time a good movement is launched. In its first year of operation the North Eastern Alberta Live Stock Crop Association has handled over \$100,000 worth of live stock. If we compare the margin taken by the co-operative to handle the farmers' stock and the margin taken before, said organization has left in the hands of the producers at least \$8,000 in one year. This saving alone to the farmers speaks for itself principally when we consider the co-operation has been shipping actively at five points only. Six other points in my district could very well be organized to join this association, but with the experience I now have, I feel satisfied that more educational work has to be done amongst the producers before attempting it. This point cannot be neglected by the field man who serves the farmers.

LIVE STOCK IMPROVEMENT

Realizing the fact that this north eastern part of the Province is exceptionally adaptable to mixed farming, by the quality of its soil, annual precipitation, waste land and lakes, one of the major undertakings of this office is live stock improvement work.

For all classes of live stock we are advocating pure-bred sires and are trying to eliminate the scrubs which are so prevalent throughout this area. It is recognized that the St. Paul district ships to the yards the poorest cattle of the province. The quality of our horses is also gradually decreasing. During this last depression, farmers had to dispose of their best young horses to realize some cash to carry on their farming operations. These sales have not been replaced and if so from scrub descent in 98 per cent of the cases.

It is to be regretted that a great portion of our efforts are undone by indifferent farmers who still have scrubs running at large and who will have nothing else but such around their place. It can be hoped that some definite national policy will be brought about to avoid this nefarious effect of these ignorant individuals.

HORSES

As stated above, the horse breeding industry has been at a decline. Having that in mind, and wishing to re-act against the present situation,

this last month, we have interested different communities in the Stallion Group Purchasing Plan, and already two Percheron Stallions have been bought for the coming season, under this scheme. I am hoping to place a few more before spring. The present situation in this district is ten scrub stallions against one pure-bred. I hope that it will be quite the reverse in a few years.

As long as good stallions are available and this Group Purchasing Scheme, in effect in this Province, there is no excuse for using Scrub sires. So I hope some very drastic action is taken to prevent these being used. It would be in the interest of the farmers as individuals and of the Province as a whole.

CATTLE

Cattle improvement work is also looked upon as a very important necessity by this office. Although our time has been rather limited, we have brought into the district three bulls under the Dominion Bull Loaning Policy and three others were bought through this office by individuals. So far, I have established only one pure-bred herd, but expect to have a few more during the coming season, in order to be able to supply this district from local herds.

In order to promise better breeding and illustrate the results of same, this fall one Beef Cattle Feeding Club has been organized. Twenty very interested members are in the club. For the first club year I did not feel we could get the boys to pay a very high price for a calf and buy the best, and therefore, cannot expect this club to compete with other specialized clubs of other districts. But I sincerely believe we will be able to demonstrate the importance of good breeding and judicious feeding. A few farmers are feeding steers this year and are getting advice direct from this office.

SHEEP

There are only a few small flocks of sheep scattered throughout the district. Oxford breed predominates. Even the biggest breeders are decreasing the number of sheep in their flocks. High price of fencing, increase in price of land and dog menace are the main factors in keeping this class of live stock in check. Three pure-bred rams were brought into this district last fall.

SWINE

At least 25,000 hogs are marketed yearly from the St. Paul district. With a great possibility of more and more farmers modifying their system of farming to establish it on sounder basis, it can be easily seen that this number will increase gradually from year to year if our quota with the British Market is renewed at the expiration of the present term.

Therefore, some time has been devoted from this office to work on the Dominion Sow Distribution Policy. Eighty-eight selected sows were imported into this district and 150 were bought and selected locally on the farmers' premises. Under said policy, eleven boars were supplied by the Dominion Live Stock Branch. From Club Members' stock we have also placed quite a few boars and gilts in the spring.

Where we know there are still some farmers who are marketing pigs at 12, 13 and 14 months old, and when we have actually seen some five and one-half months old pigs weighing only sixty pounds, we readily realize there is room for improvement. Next year we are planning to spread the best individuals (the progeny of sows selected this year) into outside districts where my activities have not yet reached.

It was a pleasure for us to see that one breeder from this district took nearly all highest honours at the Edmonton fall show this year.

POULTRY

Poultry is a side-line which should interest more farmers on our Northern Alberta farms. Being away from my district for about four weeks on blood testing, I could not, as desired, give killing demonstrations which are badly needed. For the first time the coming spring, we will have a commercial hatchery in St. Paul. I hope that local farmers will patronize this local industry and that this plan will promote some interest in poultry breeding amongst our farmers.

SOILS AND CROP PROBLEMS

We have to deal with a great number of farmers in the wooded soil areas. Consequently, we have stressed the necessity of improving these soils by crop rotation. The cheaper method of introducing organic matter is by using sweet clover. One district in particular has followed this advice since 1935 and this year, letters came to this office expressing the gratitude of the farmers who now have hopes of making a living where they were previously discouraged.

CEREAL CROPS

Early varieties have to be recommended in this district where early frost has been prevalent for a number of years in the past.

Red Bob 222 has proven to be very satisfactory for a few years. This last year, we had thirty boys in our wheat club who produced at least 1,500 bushels of good seed.

Although Lagacy Oats are not as good yielder as the Banner or Victory, they have been grown for the last couple of years and will occupy a place of honour on our Northern farms.

OAC 21 barley is yet the most popular variety grown in this district. When there is a premium for malting barley, our farmers benefit considerably by growing it.

FORAGE AND PASTURE CROPS

We never miss the opportunity of advocating a rational crop rotation which will retain the fertility of our soils; keep same clean and eventually re-establish the economic stability of the farmers of this district.

It is a pleasure to see the response we have, not only from individuals but also from Municipal Councils who are quite anxious to adopt the Forage Crop Policy and then finance said item themselves. This office has received several inquiries on crop rotation, and this coming spring we were asked to go and advise on the farmers' places.

WEEDS

This district is comparatively clean compared to some other older parts of the province; but if no ways nor means were taken to check the weeds it would not be many years before the weed problem would be a serious and expensive one for our farmers.

Wild Oats, quack grass and thistles, both Canada and Sow, are the most troublesome weeds of this district. Much more attention seems to be given to the eradication of these and everything indicates some improvement will be brought about along this line in the coming years. Many farmers now realize the benefit that is derived from the introduction of forage crops on their farms.

MEETINGS

It is true some good may result from public meetings, but in a district like this, education has to be made first and I realize we have better results by individual visits where we have a better contact with the farmer who asks all questions which he would not dare to ask at a meeting.

At least sixteen meetings were held in connection with Stallion Group Purchasing Plan and Beekeeping. All these meetings were well attended. The total attendance being 613. The Provincial Apiarist and Mr. Reynolds were the main speakers in their respective lines.

FIELD DAYS

Four field days were also attended. One at the Illustration Station in St. Paul where 350 people were present. One in Bonnyville in connection with the Crop Testing Plan; twenty-two farmers took a keen interest in the experiments carried on. Two Beekeepers' field days were also held at Bonnyville and St. Paul respectively.

BEEES

More than twenty individuals are interested in bee-keeping at present. Many more are anxious to start in this industry in 1938. This is the reason why I am planning on having short courses on the subject in February.

TREE PLANTING

Through our boys' and girls' social clubs, tree planting will be started in the spring. Some Caragana Seed has been distributed to farmers and a heavy demand is expected next May. We never miss the opportunity of advocating "Home Beautification", an item which is too badly neglected in this whole area.

BOYS' AND GIRLS' CLUBS

Having undertaken this work rather late this year, we could not expect to organize many clubs the first season. We had only two grain clubs and two swine clubs in operation this year. In the fall one calf feeding club with twenty members was organized in St. Lins. Eighty-five boys and girls belong to these different clubs.

SCHOOL FAIRS

We have judged at the Ashmont and Beaver Crossing School Fairs, and it was very encouraging to note that these fairs were a credit to our district, both by number of entries and interest taken by the public. A very successful miniature fair was organized at St. Lina for the first and everythings indicates that next year it will be bigger and better.

Too little time was devoted last fall to recruiting students for the Vermilion School of Agriculture. Although this district is represented at the School, my ambition is to send more boys and girls and take advantage to a greater degree of such valuable and practical educational facilities so close to home.

Never did I miss the opportunity of advocating testing herds for T.B. A good response is noticeable as there has been more herds tested this year than before.

WESTLOCK DISTRICT

(E. G. Wood)

In many respects the past year proved to be rather disappointing from the standpoint of the farmers operating in the greater part of the area served by this office. The extremely dry weather, which prevailed during the early part of the growing season and which extended up to July 13th, seriously interfered with the normal development of the earlier seeded grain crops with the result that comparatively low yields of wheat were obtained. Fortunately ideal climatic conditions in the latter part of the season permitted the later maturing crops to develop and ripen and coarse grains made a wonderful showing at time of harvest. With the improvement in the price of wheat and other farm commodities, an abundant supply of winter feed for live stock and fair quality of surplus grain for sale, many farmers find themselves in a somewhat better financial position than has been the case for the past number of years.

Although the wheat crop has been and still is the main source of revenue on the majority of farms there is a definite tendency towards a more diversified cropping system with coarse grains finding a more prominent place in the rotation. Farmers are also devoting more attention to other sources of revenue from the farm and some very profitable sidelines are being developed thus eliminating to a considerable degree the possibility of failure and insuring a more steady income throughout the year.

CATTLE

There is a very definite need for improvement of cattle produced in this area. It would appear that few farmers have any ideal or objective so far as their cattle breeding programme is concerned and cross breeding, especially between the dairy and beef breeds, is the common practice. The use of scrub sires is also responsible in a large measure for the inferior class of cattle produced and for the lowered price which is obtained when these cattle are sold on the market. A number of sires have been dis-

tributed over the district through the Dominion policy and these bulls are improving the cattle to some extent in the areas in which they are placed. With the increase in the price of butterfat, dairying is becoming somewhat more popular. There are three creameries operating in the District and according to reports obtained there is a very marked increase in the quality of butter manufactured during the past year.

This office is strongly advocating the elimination of the scrub sires and the adoption of a definite cattle breeding policy for the farmer. Assistance has also been rendered in the way of securing herd sires as well as a number of females as foundation material.

SWINE

Hog raising continues to be one of the main sources of revenue on the majority of farms. There is a gradual improvement taking place in the quality of commercial hogs and the percentage of selects and bacons is slightly above the average for the Province. Many breeders are now taking advantage of the facilities provided for rail grading and the results so far obtained would indicate that the number will continue to increase. The industry is now fairly well recovered from the severe setback experienced in the fall of 1936 due to feed shortage and the lowered market prices.

Junior Swine Clubs were organized at Colinton and Boyle with a total membership of thirty. A number of pure bred gilts were purchased and distributed to Club members and the required number of boars secured through the Dominion Live Stock Branch. Two other Swine Clubs, Barrhead and Neerlandia, were fostered throughout the season but Fairs were not held at these points

HORSES

A definite effort was made to place stallions in the District through The Provincial Stallion Purchase Policy. Owing to the financial position of many farmers it was found to be a difficult matter to create sufficient interest in the scheme with the result that only two stallions were placed. The use of the scrub stallion interfered to a large measure with the formation of Stallion Clubs. It is expected that under improved financial conditions it will be possible to place a greater number of stallions this coming season.

POULTRY

The poultry industry in this District received a severe setback this past season due to the comparatively high price of feed and the low price for poultry products. The hatching egg season was considerably shortened on account of the lessened demand for chicks and profits derived from this phase of the industry were greatly reduced. Where the poultry flock consisted of high quality birds and where recognized feeding and handling methods were adopted a certain amount of profit was realized from the business.

So far as this office is concerned, poultry work was largely confined to blood-testing and upwards of 3,500 blood samples were obtained. A cer-

tain amount of assistance was given by way of securing breeding stock and giving out of information pertaining to poultry house construction, feeding and other phases of the industry.

FORAGE CROPS

The acreage devoted to the growing of forage crops is rapidly increasing. The interest taken in these crops is due largely to the fact that farmers are beginning to realize their value from the standpoint of soil improvement, weed control, feed for live stock and the profitable returns which may be expected from the sale of seed. Considerable time and effort has been devoted by this office to the marketing and distribution of forage seed. Outside buyers have been encouraged to visit this District in order to secure their requirements of seed and thousands of pounds were sold at prices which brought generous returns to the growers. In some cases there returns amounted to over \$90.00 per acre. Local sales were also made which amounted to a considerable volume.

Two Municipalities and three Local Improvement Districts took up the distribution of forage seed under the Dominion-Provincial Forage Seed Distribution Policy and upwards of 6,000 pounds were distributed in this manner. Nitro-Culture was made available through the office and one hundred bottles were sold in the District. Some time was also devoted to experimental plots and a test is being conducted with clovers and grasses as well as mixtures to determine their respective adaptability.

AGRICULTURAL SOCIETY

As Secretary-Treasurer of the Westlock Agricultural Society, much time and labour was devoted to the welfare of this organization. The 1937 Fair proved the most successful in the history of the Society having slightly over 1,000 entries to its credit as compared to 400 in 1936. Exhibitors received prize money amounting to over \$500.00 which exceeds the 1936 payment by \$300.00. Being directly connected and actively engaged with the work of the Society has been responsible for many valuable contacts and the results obtained are very encouraging.

Through the efforts of the Agricultural Society, eighty farmers from the Westlock District attended the Feeders' Day at the University on June 15th.

BEE-KEEPERS' ASSOCIATION

This office was largely responsible for the organizing of the Westlock Bee-Keepers' Association this past season. This organization has rendered a valuable service to the bee-keepers of which there are approximately eighty in the vicinity of Westlock. A great many beginners took advantage of the assistance given and were greatly benefited from the lectures and demonstrations which were carried on during the season. Package bees and other supplies handled by the Association and made available to the members at the lowest possible cost. Although the 1937 season cannot be considered a very favourable one from the standpoint of honey production, some fairly high yields have been reported. From all appearances there is every indication that bee-keeping can be carried on in a small way on many farms and at the same time can be made a profitable sideline.

RELIEF

Although not directly responsible for the purchase and shipment of feed from this District to the dried out areas of the south, this office co-operated to a large measure in the work and every assistance was given to the shippers of feed. A large number of land inspections were also made for the Bureau of Relief and Public Welfare.

Apart from the work which has already been mentioned, this office has been requested to render service and information on practically all lines of agricultural production as well in the field of marketing. Requests for this service continues to increase but owing to the large territory which one is expected to serve considerably difficulty is experienced in carrying on the work as efficiently as one would desire.

GRANDE PRAIRIE DISTRICT

(G. S. BLACK)

The crop year of 1937 was one of the driest on record in the Peace River country. Less than 50 per cent of a normal crop was harvested. Coupled with the fact that many felt prices would increase late in the fall and that they have not done so conditions are decidedly below that of last year.

Crops were sown under ideal conditions. A splendid reserve of moisture which occurred during the fall of 1936 being responsible. Spring opened up at the usual time and coupled with ideal weather conditions, the bulk of the crop went in, in excellent shape. Continued dry weather coupled with high winds dried out the soil and allowed much wireworm damage. The crop ripened fast and was harvested and threshed under good conditions; the bulk of it being out of the way by October. The quality was good most of it grading in the top three grades. Frost damage occurred in a small area during the month of August, the bulk of the crop escaping same. Pasture was short and tame hay crops light. Good fall rains caused a vigorous growth and much fall work was accomplished. Fall tillage this year should in many sections do much to control weed development of the past few years. The feed situation is passable. Should a normal winter occur many will get by, a long severe winter will mean much hardship. Considerable quantity of low quality hay was put up in the few marshy sections of this area. Quite a movement of settlers has occurred into the newer districts, these men were mainly from the dried out areas of eastern and southern Alberta. Shipments of live stock to outside markets were heavy, increased prices early in the fall coupled with short pastures being mainly responsible. A decided increase into grass and clover crops is noticed. The problem of replacing Garnet wheat which many are discarding is one of importance. Live stock are wintering fairly well to the present as the hay until last week being good. Poultry shipments were very light and interest in this phase of farming is low. Garden crops were surprisingly good considering the amount of rainfall.

HORSES

The period of low prices for horses is definitely over in this part of Alberta. However during that period horse breeding was at a standstill and this condition is now being reflected in the lack of suitable young stock. Many farms are sorely in need of much replacement. The interest in horse breeding is now good. Eleven stallions are now in service under the Provincial Stallion Club scheme. The bulk of these horses are in districts where they have replaced grade or inferior horses. It is pleasing to report that some real good horses are now in the newer homestead sections. Belgian horses are most popular with Percheron and Clydesdales a close second. The quality and number of colts being left under this plan augers well for the future of many a district.

Plans have been made for the possible introduction of more stallions although at the present lack of cash is holding back developments. There is a good demand for good young horses weighing from 1,400 to 1,600 lbs. Diseases in horses have been more than average this year. The dry season has caused much drying up of normal water supplies and animals are drinking water which may be contaminated. The continued dry diet of wheat straw may cause further trouble before spring.

CATTLE

A large number of cattle are grown annually in this area. Extra heavy shipments in the early fall have caused a distinct shortage in many herds. Much unbroken land is used for pasture but very few loads of properly finished cattle are shipped to market. This practise having not proven a very successful financial venture many have gone out of cattle. The quality of breeding stock leaves much to be desired. Inferior bulls are in evidence in many sections. Due to the fact that homesteaders had not sufficient capital to purchase good sires many very inferior animals were used. The Dominion Government in an attempt to counteract this successfully started many cattle clubs. These clubs have done much good. The fact that very few breeders raise pure bred animals makes it a very high cost to purchase pure bred sires outside and ship same in. Work has been done by this office in encouraging the forming of such clubs, the elimination of scrub animals and the better feeding of cattle before shipping. The free use of a cattle dehorner should assist in greater revenue and less bruising in shipping, this is being advertised through the press and at meetings. Although much publicity was given the use of Warble Fly powder very little is being used. Much work of this kind is very slow in returns although one feels that it is correct and right. The main point in the cattle business this year is the shortage of feed which early this fall caused large shipments outside.

SHEEP

Only relatively few sheep are grown in this area. Those having sheep have been assisted by the securing of good quality rams from outside and in a few cases good pure bred ewes have been purchased. This year exchanges were made resulting in continued use of good sires. Local market is small and shipments outside for the past few years were not profitable. Should sufficient become interested to ship double decked cars

much better prices could be assured. Sheep men have been well pleased this year with their returns although reporting much loss by dogs. In connection with live stock shipping a farmers' co-operative organization here handles a large portion of the business which is increasing annually.

FORAGE CROPS

Although a relatively new country much of the older sections is devoted to grass crops. Large amounts of brome grass have been harvested successfully and much seed shipped. This office is spending much time in trying to popularize forage crops. Through the forage crop plan this office was able to place over 2,000 lbs. of grass and clover seed with farmers at half price. Considerable amounts of sweet clover were grown and much seed is now available for seed. The present situation here would be improved if cleaning equipment was available. This may be necessary before much headway can be made in small seed growing. Alsike clover seed does splendid in many sections here. This seed is in demand and the price is usually good. A number of farmers have been started and report fairly successful returns despite an adverse year. Crested wheat grass proved to be a very heavy yielder and those who took the necessary pains with their seed have much to be thankful for as same was placed at a good price. The interest in the seed production end is satisfactory.

As much of the newer soils are distinctly of the grey order clover must be used to rebuild them. The time spent in the forage crop programme could easily be duplicated with good results. Sections of grey soil areas here have already been abandoned and are again being farmed by new comers. Methods used in their former districts will not work here and clover rotations must be encouraged or they will again throw up this land.

Hay crops were light and crops of seed far below normal, however the late rains may have saved much of the newly planted seed. Considerable amounts of Brome Grass, Crested Wheat Grass and Alsike clover was purchased by the Department of Agriculture here at satisfactory prices.

SWINE

During the previous year a car lot of choice breeding stock was secured. However as last year's crop of grain sold at very high prices there has been a marked decrease in the number of sows bred this fall. Feed is short and coupled with the fact that many cleaned out last year's crop to the last bushel live stock had to be dispensed with. A large amount of swine is grown here, however, there has not as yet been establishing the buildings and permanent equipment. In the majority of cases swine houses are of such that winter feeding is very difficult and discarded old buildings used. There is some interest in the plans submitted and a number of new houses have been built. The swine business here is still smarting from the low prices of a few years ago. My observations are that it is just about the point where it will become a permanent part of farming. Up to now it has been a side line and therefore considerable of an in and out game. The quality of breeding stock is very good and will improve from now on. Much work still remains to be done by this office in connection with feeding experiments. The use of Tankage and minerals being more of a problem than outside as costs are higher and the merits

of same not being too well known. As long as there is such a strong demand for seed grain at premium prices many hesitate to venture very deep into hogs. However frosted crops and seed cleanings have an outlet this way which cannot be duplicated.

A number of boars and sows were placed. The swine club sires have proven of real value and are very good type animals.

FIELD CROPS

This part of the province is noted for its high quality seed and the yield of same. The growing of Registered and Certified grain particularly oats is of major importance. During the past year practically the whole crop of such grain was marketed across Canada. This was sold at an average of sixty cents per bushel f.o.b shipping point for No. 1 seed. In addition much unregistered seed was sold through elevator companies and commercial seed houses. It was the best year in the history of this district. However it followed a period of low prices and much of the money received was needed to pay back debits. The growing of this seed is on a large scale and a number of large improved type cleaners are in use. The Peace River Co-operative Seed Growers had a very successful year. Forty-five car lots of seed were purchased here by this office. This entailed a large amount of work but had the added effect of allowing of making many contacts otherwise impossible. This order by the Provincial Department created much goodwill in this district. The office here at all times is used in connection with the inspection department of the Dominion Government. In turn farmers are using it more and more for matters in connection with seed. The securing of elite seed, germination reports, sales matters are being continually brought here.

A number of excellent samples of grain were forwarded to the Toronto and Chicago Shows. I am pleased to report that championships were won and no sample stood lower than seventh at any fair. The District Seed Fair held here last month was well attended and a very successful short course also held. Increase of thirty per cent in the number of samples shown was noted. Many new exhibitors appeared.

Weeds are a major problem. Although the municipalities have weed inspectors and the department have men in the unorganized areas the number of fields having new weed patches is increasing. The spread from outside of the newer weeds is being closely watched. Much educational work is being attempted and no effort is spared in the fight against this class of infestation. The problem of the absentee land-owner coupled with the short term tenant is an acute one in some areas. Much chemical was used in counteracting new small infestations. Water erosion is a very serious problem over this north land and one of its effects is the carrying of weeds on to other farms. Bulletins, posters, and meetings are being used as the means of combating same. Some time and assistance was given to quack grass eradication this year with very favourable results.

FIELD DAYS

A number of field days were held and I also attended others given by the Dominion Experimental Farms Branch. Crop testing days were held at Sexsmith, Hythe and Spirit River with a fair attendance. Junior club

days were held this year under the scheme of farm visiting. This has much to merit it as farms expecting a goodly crowd of keen eyed youths are invariably in good condition; plots are at their best and many points often neglected cleaned up and on display. The first gatherings of Bee-keepers was held and a splendid turn-out ensued.

JUNIOR CLUBS

A number of splendid junior clubs are organized in this section. However I feel there should be more, particularly live stock clubs. Several attempts have been made to increase these clubs but apparently the interest is more toward grain clubs. The fact is noted that unless the parents are sympathetic and encourage the starting of these clubs they do not develop very far. Where communities ask for clubs and agree to help with the work particularly the securing of members at the start much good can be accomplished. Grain clubs have proven of real worth in this area. The keen young club members have consistently shown their grain exhibits at Toronto and Chicago and have secured some outstanding wins. James Sebastian was crowned wheat king at Toronto this year while another club member, Justyn Rigby was oat king last year. Members are keen in their work and have supplied considerable quantities of grain to other farmers. Albert Allsop and Lloyd Rigby have succeeded in winning both the Provincial and Dominion Grain championship contests this year. Their wins were highly thought of here and club work will be materially helped.

Some of the older swine clubs are being discontinued and a new one started this year at Beaverlodge. Calf club members are hard to obtain although those who carried the work through last year made a good job of it. Club work entails a lot of mileage and time and one cannot do anything like the amount they would desire to do in such a large district as this is. It is well to note that much of this area is new land where roads are poor and not gravelled highways.

MISCELLANEOUS

Upon instructions from the Department I again assisted with the boys' camp at Edmonton summer fair. I felt this camp was a successful one and a fine class of young men was in attendance.

Assistance has been given the University staff regarding the holding of three youth short course schools in this area. The Grande Prairie course had an enrolment of fifty students. The school at Spirit River promises to have an equal attendance while at Beaverlodge a larger attendance is hoped for.

Land inspections on both the north and south sides of the river took much of my time this fall. Much of this work is at points very difficult to gain access to and takes a lot of time.

The office which is located at Grande Prairie is an old established one. Constant use of it is being made by the farming community both in personal visits and by correspondence. Many duties too numerous to mention in connection with farmers' clubs of all kinds, etc., keep one busy. However, I have splendid co-operation by the people here and it is indeed a pleasure to serve in such a community.

BERWYN DISTRICT

(W. S. SCARTH)

The Berwyn office serves, in main, the territory lying north and west of the Peace River, including the district east tributary to the town of Peace River. When opportunity permits, calls are also made in the Donnelly-Fahler district, as well as High Prairie. The office is open only during the summer months, generally from April 15th to October 15th, which naturally limits its activities to those than can be undertaken in the summer season. In many cases the agricultural problems are peculiar to the district itself. Much of the district is of comparatively recent settlement, and a great deal of time has been given to visiting the more isolated communities in an endeavour to help the settlers with some of their problems.

The season of 1937 will be remembered as one of the driest on record in the Peace River district. Rainfall records over a number of years indicate an average of 6 to 7 inches of precipitation between April 1st and August 1st in the district, and this summer the average rainfall for this period was only slightly over 3 inches. Conditions during seeding were excellent and all crops made satisfactory progress until about the middle of June. From then on the limited rainfall was only local in extent, with a consequent wide variation in crop yields. The High Prairie district was more fortunate, however, and harvested a good crop. Wheat yields in the Peace River-Fairview territory varied from 10 to 20 bushels per acre, with coarse grains 20 to 40 bushels. In a district where there is usually an abundance of rough feed, the prolonged dry spell of July and August shortened fodder supplies to an alarming extent. The cut of wild hay, which is generally plentiful in some areas to the north, was also disappointing. All these factors will naturally reduce the amount of live stock that will be wintered to a minimum.

Live Stock.—The rapid rise in grain prices during the winter of 1936-37 had discouraged the increase of marketable live stock in this territory. This situation appears to affect the cattle population more seriously than other classes of stock. The lengthy winter feeding period and long rail haul are both important factors in lowering profits and low prices of recent years have naturally discouraged farmers from increasing their holdings. It must also be kept in mind that in a large section of the area, particularly between Whitelaw and Fairview on the west, there is a decided shortage of good water supply, farmers having to depend on dug-outs for most of their needs. In a country where feed shortage is hardly ever a problem the dry summer of 1937 has forced many farmers to reduce herds to a minimum. Dairy productions is practically confined to supplying domestic needs, although fairly large cream shipments are made to the Peace River Creamery during the summer months. Unfortunately the indiscriminate crossing of dairy and beef breeds which took place in the district some years ago is still in evidence in many of the offspring at present. Special mention should be made of the Federal Bull Loaning Policy which is doing very valuable work in a number of outlying settlements by supplying good beef bulls for farmers who would otherwise be forced to use scrub sires.

Stock from these Federal bulls is showing up very creditably in the communities which they are serving.

It is encouraging to report a general improvement in the quality of hogs going to market, although the shortage of oats and barley for feed this fall will undoubtedly reduce the number of sows in the district and this office has encouraged and assisted those interested in procuring others. Local hog shippers and farmers have been trying out Rail Grading to a greater extent this year and all interviewed have expressed satisfaction with the method of marketing. Litter losses have not been serious as compared with 1936 and helpful suggestions have been given several breeders in co-operation with investigations by the University of Alberta.

Interest has increased in horse-breeding, and it is encouraging to report the purchase of several new stallions in the district, some by private individuals and two or three by syndicates. That there is still a shortage of good work horses in the territory is indicated by the fact that several carloads were shipped in from outside points in the winter of 1936-37. Many of the larger farms are depending on tractors for the main source of power during the spring rush and summerfallow work, but the average farm still looks on the horse as the most adaptable power unit for all seasons. It is to be regretted that scrub sires are apparently still used in many of the newer and outlying homestead areas, where settlers have little, if any, means of financing the purchase of good stallions. Where possible to contact influential men in such a district this office had endeavoured to interest them in the co-operative purchase plan, but the total lack of money among many of these people placed them in a particularly difficult position.

Cereal Crops.—Cereal crops form the major portion of the farm income in the district. This office has co-operated with all other agencies working for crop improvement, the main ones being the Elevator Test Plot system and the Federal Seed Branch activities. Excellent work is also being carried on by the Dominion Illustration Stations at Fairview, Dreau and High Prairie, where it was my privilege to co-operate at Field Days organized by Mr. W. D. Albright of the Experimental Sub-Station at Beaverlodge. The district was particularly fortunate in having Dr. Newman, Dominion Cerealists, as chief speaker at these gatherings, all of which were well attended. This office has discussed with a number of farmers the advisability of having another Dominion or Provincial Illustration Station established in the large gray soil area, lying between Grimshaw and the Battle River country, sixty miles north. It is hoped that further steps can be made to carry out this plan, as there are many new settlers in this territory who are having great difficulty in producing any revenue from homesteads in this large wooded soil area.

While the district north of the river has never attained the prominence of the Grande Prairie-Wembley area in the growing and exhibiting of prize winning cereals, there is a nucleus of interested grain growers who have been encouraged to enter this field of farm activity. It is a pleasure to report that many more farmers have been putting in small acreages of registered seed with the idea of improving their seed stocks. During the season interested groups of seed-growers and farmers have formed local organizations at Gage, and in the Berwyn-Grimshaw district with

the object of procuring portable seed cleaners for service in these communities. The District Seed Cleaner at Fairview continues to give satisfactory service.

At present the greatest problem facing the wheat grower in the north is that of a suitable variety. Garnet is by far the most popular variety, and with recent changes in grading, wheat growers are anxious to know about newer varieties that should be coming in to replace Garnet. Barley is coming into more prominence as a revenue producing cereal in the district, especially since the success achieved by the Olli variety. It has proven an early ripener and of satisfactory malting quality for this territory.

Forage Crops.—Every opportunity has been taken to stress the importance of a regular forage crop programme on the farms of the district. Small areas of alfalfa are demonstrating the success of this crop on many farms, with sweet clover becoming more general both for forage and soil improvement. Soil surveys indicate that practically 75 per cent of the present settled area in the district is classified as wooded or gray soils, so that a forage programme including some of the league crops is essential. The value of a well established forage crop was particularly evident throughout the recent dry summer, when much of the native hay crop was almost a total failure. Some very fair cuts of both clover and brome grass were observed in many communities. The value of the forage crop as a weed fighter has also been discussed with farmers who find that some of their fields are badly over-run with the more serious weeds and that ordinary cultural methods have failed to effect control. The native pasture of the northern districts, especially of those areas included in the wooded soil belts, is of poor quality, and settlers are being encouraged to sow down at least small acreage for pasture improvement. Unfortunately the dry conditions that persisted throughout the summer of 1937 made good catches of grass or clover difficult, and many who intended to sow increased acreages of forage crops in the early summer did not do so. Several farmers especially interested in forage seed production have been encouraged to increase their acreage of crested wheat grass as this grass seems to produce abundant seed yields in the northern areas.

Junior Clubs.—Junior Farm Club work is still very much in its infancy in this district. The Fairview Wheat Club has operated for two years but did not re-organize this spring. The members were not satisfied with Reward wheat in their district and seed for other varieties was not available. The High Prairie district organized a new Oat Club with a large and enthusiastic membership. The members made a two day trip to the Experimental Sub-Station at Beaverlodge for their Field Day in August. Special mention should be made of the instruction and entertainment provided for the Club boys by Mr. Albright and his staff.

The Swine Club organized in the Berwyn district last year, carried on their programme during the summer and their Fair was held in October. Unfavourable weather conditions and postponement cut down the Fair attendance.

Assistance was given in judging at the Donnelly and Bluehawk School Fairs. Judging was also done at the annual Agricultural Fair at Donnelly, and two small local Fairs at Peace River and Clear Hills.

Weeds.—In a comparatively new grain growing area the weed problem has been given some special attention by this office. Assistance of an advisory nature, dealing with control methods has been the policy followed. Numerous inquiries have come from weed inspectors and new settlers. Unfortunately wild oats and stinkweed have become firmly established on many of the older farms before the occupants have awakened to the seriousness of the situation. The lack of funds to properly supervise weed control in the Improvement Districts is hampering the progress that should be made. One of the greatest problems of the north Peace River slope is that of erosion and soil washing. It is already assuming alarming proportions on some farms. The wash of soil for several miles naturally carries weed seeds with it and often serves to pollute clean land. Another source of infestation is the arrival of new settlers with their effects in the Peace River country, and several visits have been made to locations where these people are establishing themselves to encourage weed control. Another troublesome source is abandoned homestead land. There has always been the best of co-operation from both Municipal and Departmental Weed Inspectors.

REPORTS OF THE SCHOOLS OF AGRICULTURE

OLDS SCHOOL OF AGRICULTURE

(JAMES MURRAY, *Principal*)

The 1936-37 term was brought to a close on April 7th, about a week later than in previous years. We had one of the largest graduating classes in the history of the school. Diplomas in Practical Agriculture were presented to forty-seven young men and certificates to three. In Home Economics twenty-seven young women received diplomas and three certificates.

We were fortunate in having with us for the closing exercises Dr. Warwick F. Kelloway of Knox United Church, Calgary who delivered an inspiring address to the graduating class, and Mr. H. A. Craig, Deputy Minister of Agriculture who presented the prizes that had been awarded, and briefly addressed the assembly.

The winners of the principal prizes, scholarships and medals were the following:

Gold Medals for General Proficiency:

Agriculture—

Second Year—Rex Young, Calgary

Two-In-One—John Paterson, Airdrie

Home Economics—

Second Year—Mary Oakes, Calgary

Two-In-One—Marjorie Smith, Olds.

Wheat Board Scholarships of \$100.00 each to graduates in Agriculture who enter the B. Sc. course at the University of Alberta:

Bryce Stringham—Glenwoodville

Donald McPherson—Delia

George Scott—Calgary

Anders Anderson—Medicine Hat

Marriott Bolton—Leduc

Wheat Board Scholarships of \$75.00 each to First Year students standing highest in General Proficiency:

Agriculture—Douglas Smith, Lethbridge

Home Economics—Gladys Skalin, Kingman.

Mr. A. L. Searle Scholarships of \$50.00 each for progress in the work during the year:

Agriculture—Joseph Allen, Penhold

Home Economics—Verna Dye, Elnora.

Girls' Alumnae Scholarship of \$50.00 to the student in Home Economics who made the best use of her educational opportunities, at the same time

making contributions to the literary, social and athletic life of the school:

Awarded to Jean McMillan—Huxley.

O. S. A. Experimental Union Scholarship of \$50.00 to the student in Agriculture making the best use of his educational opportunities at the same time contributing to the literary, social and athletic life of the school:

Awarded to Murray Anderson—Calgary.

The M. R. Maybank Scholarship of \$25.00 for highest standing during the year in Sewing, Foods and Cooking, Home Nursing, Household Administration and Laundry:

Awarded to Doris Niven—Lethbridge.

The Olds Creamery Scholarship of \$25.00 for highest standing during the year in Carpentry, Blacksmithing, Farm Machinery, Live Stock Judging, Grain Judging and Poultry:

Awarded to Ottomar Lange—Claresholm.

We appreciate the kindness of the friends of the School who so generously contribute each year to our prize list. We are glad to say that many scholarships similar to those above have been offered for the work of the current school year.

Of the students who graduated last year seven entered the faculty of Agriculture at the University of Alberta, one the faculty of Agriculture at the University of Saskatchewan and four the Ontario Agricultural College at Guelph, Ontario. At the University of Alberta at present we have twenty-six graduates of the school in undergraduate classes and four taking graduate work.

Our courses in both Agriculture and Home Economics are planned primarily for those who intend to return to their homes on the farms of the province, but we are glad to have a few each year proceed to other institutions for further training.

More than the usual amount of sickness was experienced with the students during the spring term. Measles and mumps were both epidemic. We gave the best medical and nursing care with the inadequate facilities at our disposal but we had quite a number of serious complications which had to be treated in the hospital. All of these made a satisfactory recovery except Ruth Sampson of Kirriemuir who died in the Holy Cross Hospital in Calgary.

This term we have had a number of cases of measles but they have all run a normal course without complications. Our hospital accommodation is most inadequate and we hope that more suitable arrangements may speedily be made for properly looking after those who are ill.

This year we have a total enrolment of 192. The dormitories are full and it is necessary to have fifty find accommodation in homes in the town. We find it necessary to have four divisions of our first year class in Agriculture for laboratory work. With the other divisions this gives ten classes in all.

The enrolment this year is divided as follows:

	Agriculture	Home Economics	Total
First Year	89	30	119
Second Year	36	12	48
Two-In-One	14	11	25
Total Enrolment			192

Included in our first year class in Agriculture are fifteen boys getting training under the Unemployed Youth Training Plan. These boys came in a month after the regular classes began, and were in consequence, somewhat handicapped. However most of them made a creditable standing on the Christmas examinations. Classes were continued for these students through the Christmas holidays to cover some of the work they missed at the start of the term.

At the close of the term last spring many of those receiving diplomas expressed a desire to return and take additional High School work so that they might proceed to the University for a degree. At the time it looked as though there might be a possibility of reviving our Third Year course. When application forms were sent out in the summer we had a poor response. Only eight made definite application for the course and this was not a sufficient number to warrant our giving it. Several of those who are determined to get their matriculation standing are taking the work at other schools or with private tutors.

SCHOOL FAIRS

In April 1937 seeds were distributed to 59 Fair centres and of this number 52 held Fairs. Seven Fairs were cancelled due to epidemics of measles or infantile paralysis, viz.—Cochrane, Foothills, Oyen, Cypress Hills, Hilda, Empress and Bindloss. A few other Fairs were held at postponed dates for the same reason.

The Fairs were well attended, the interest good, and the exhibits for most part of high quality. The average number of entries were 903, the number ranging between 417 and 1415.

New Fairs added this year were Lethbridge, Munson, Tilley and Woolford.

The judging was done by three crews, each consisting of a man and a lady from the Olds Staff, assisted by the District Agriculturists and School Inspectors in their respective districts.

The present outlook is that there will be about 55 centres conducted from Olds in 1938.

SUMMER COURSES AND MEETINGS

Under the direction of the Extension Department of the University of Alberta a School of Community Life was held here for the three weeks beginning June 24th. The school was patterned somewhat after the Folk Schools of the Scandinavian countries as an experiment in adult education. Only a nominal fee was charged for registration and instruction, and students were given accommodation in the dormitories at the low rate of \$1.25 per day. An excellent program was provided including a course of lectures on Current History and International affairs by Dr. H. L.

Stewart of Dalhousie University and one on Rural Sociology and Social Science by Dr. Harold Etter; on Dramatics by Mrs. Haynes and Mr. Theo. Cohen; English Literature by Mrs. Butterworth; on Co-operation by Mr. Donald Cameron; Citizenship by Mr. Hugh McPhail and by Miss C. McIntyre on Modern Homemaking.

The subject matter in the courses was excellent, meriting much better support than that accorded. The attendance was the only disappointing feature. There were over eighty registered for parts of the course but only about a dozen were in attendance throughout. It would seem that mid-summer is not a suitable time for such a school.

The midsummer course of four days provided specially for women from Alberta, but open to all women, continues to be well attended. About eighty were registered for the whole course and over one hundred were here for special days. The women live in the dormitories and enjoy the social contacts, the temporary freedom from household duties and the lectures and demonstrations that are provided by members of the staff. We were glad to have a number back who have been here in former years.

We were glad to again welcome for their annual convention the members of the Women's Institute Girls Clubs. Over one hundred young women gathered for the week. A number of demonstrations and lectures were provided by members of the School Staff.

The Mountain View Live Stock Shippers Association arranged a Field Day at the school in the latter part of July. About one hundred farmers were present and thoroughly enjoyed the programme on live stock topics. Hon. D. B. Mullen delivered an address on the provincial live stock policy. Addresses were given by Mr. Frank Baker representing the Canadian Packers on bacon markets; Dr. R. D. Sinclair of the University of Alberta on factors affecting hog production and by Mr. R. L. Layton of the Dominion Live Stock Branch on hog grading.

A Horticultural Field Day was arranged in conjunction with the annual students reunion. Contributions were made to the program by Dr. J. S. Shoemaker of the University of Alberta, Mr. Duncan Hargrave of the Brooks Horticultural Station and Mr. A. T. Kemp, Instructor in Horticulture. The attendance was disappointing but we hope for a better turnout another year.

A number of other field days and many picnics were held on the grounds during the summer. The lawns, trees and flowers provide an attractive setting for gatherings for young and old. Interested visitors can usually glean some information that will be of value to them when they return home.

GREY WOODED SOILS AND PEAT SOILS

Two years ago we started some experimental and demonstration work on some of the grey wooded soils from twenty-five to forty miles west of Olds. This work was continued in 1936. Much interest was shown in it not only by the farmers on whose farms the work was done but by many of their neighbours.

Many farmers have moved into the areas during the past ten years and larger areas of land are being brought under cultivation. Much of the

soil is poor; low yields are secured of both grains and forage crops. The experiments undertaken were conducted with the object of solving some of the soil and crop problems with which the farmers are faced.

Work is proceeding along the following lines:

1. The production of high quality forage crops instead of the low yielding native grasses of doubtful quality.
2. The use of farmyard manure as a soil improver.
3. The value of legumes in improving the soil for cereal production.
4. The growing of seed of clovers, preliminary experiments having given very promising results.
5. The kinds and amounts of commercial fertilizers to use on the various crops and soils.
6. The testing of varieties of cereals, flax and forage crops as to their suitability to the soils and climate of the district.

In some of this work we are co-operating with the Field Crops Department of the University. For that department we planted eight varieties of barley, twelve varieties of soft wheat, four of hard wheat and four of flax. The milling, baking, malting and oil tests are being made at the University.

Two field days were arranged this year on farms where some of this work is being carried on: August 5th at the farm of Mr. H. A. Plumb, Bearberry and on August 6th at the farm of Mr. George Botham, Sundre. There was a good turn out of farmers at both places.

At the farm of Mr. Plumb the first work was begun in 1935. At the field day several of the plots seeded in that year were used to show the advantage in growing suitable types of forage crops and in fertilizing them judiciously. When the plots were harvested and weighed the following results were secured in 1937:

Treatment	Siberian Red Clover	Alfalfa	Alsike	Wild Grass
1. Check	1,746	1,331	1,033	788
2. Ammonium Sulphate 100 lbs. per acre.....	5,324	3,407	3,088	...
3. Ammonium Phosphate 16-20 50 lbs. per acre...	3,993	2,257	2,587	...
4. Ammonium Sulphate applied in 1936.....	2,183	1,523	1,044	...

The yields are given in pounds per acre. The fertilizer was applied to plots two and three on May 6th and all plots were closely pastured until the end of May.

RELATION OF FERTILIZER COST TO HAY PRODUCED

Cost of fertilizer per acre	Additional pounds of Hay produced per acre		
	Red Clover	Alfalfa	Alsike
\$2.00 Ammonium Sulphate	3,578	2,076	2,055
\$1.25 Ammonium Phosphate	2,247	926	1,554

YIELDS OF CLOVER SEED

Crop	Treatment	1937 yield in lbs. per acre
Siberian Red Clover	Check (No fertilizer)	75
	Ammonium Phosphate 16-20 50 pounds	514
	Ammonium Sulphate 100 lbs.....	604
	Fertilized in 1936 only (Ammonium Sulphate).....	181

The above figures will serve to illustrate the striking results that are being obtained. Work is being carried on with fifteen farmers all of them within twenty-five miles of Sundre—mainly north and west. Several more farmers are being added to the list for 1938. Accurate records are being kept of all results for future reference. This work is under the direct supervision of Mr. C. E. Yauch.

HORTICULTURE

The following notes on the season are of interest.

The lowest temperature of the year was January 14th when -33° F. was recorded. The coldest day in the fall was Christmas day, -31° F.

The last spring frost occurred on May 29th when 29 F. was recorded. In the orchard surrounded by trees the lowest the same night was 32° F. The highest temperature of the summer was on June 29th, 97° F. in the shade. The following day it dropped to 66° F.

The heaviest rainfall was on July 15th, 1.56 inches. The precipitation for the year (rain and snow recorded as rain) was 20.56 inches.

Of great interest to visitors, not only from the immediate vicinity but from many parts of the province was the good crop of fruit in the orchards. Plums for the first time since the orchard was established yielded a full crop—no winter killing being experienced. Four trees of Opata plums not over six feet high yielded 640 pounds of fruit. Many other varieties of plums and about fifteen varieties of apples and crabs produced good crops. There was a ready demand for all the fruit produced. Many visitors were interested in the production of vegetable seeds. We had splendid seed crops of pease, swede turnips, cabbage and beans.

The grounds were particularly attractive during the past summer in spite of a hot dry spell in June. Flowers bloomed in profusion late into October and the liberal rains of September kept the grass in excellent condition. Our collection of trees, shrubs and perennials is gradually being increased so that visitors from the farms of Alberta may see what will thrive here. Throughout the year we get numerous inquiries regarding the improvement of home grounds showing that people are alive to the importance of making their places look attractive.

FIELD HUSBANDRY

We are continuing much interesting work with forage crops, grains, and rotations. Among the cereals there are two varieties which are of particular interest, one a barley and one a wheat. Olli barley is a comparatively new sort from Sweden introduced into Canada by the Dominion Experimental Farms. It is extremely early and a reasonably good yielder.

It is favourably regarded by malsters and promises to be useful in districts with a short season.

There is an urgent need for an early wheat to take the place of Garnet, this variety being now heavily discounted on the market. For several years we have been testing out a number of varieties introduced into cultivation primarily for their immunity to rust. Among them is one variety fully as early as Garnet, a good yielder and of much better quality for milling and baking. We are growing this variety on several farms on the grey wooded soils west of here to ascertain how its quality holds up when grown under the soil conditions where it would be expected to be grown commercially. The tests are giving promising results but are not yet sufficiently exhaustive to warrant the introduction of the variety.

FARMERS SEED SAMPLES

In co-operation with the Field Crops Branch and a group of elevator companies we grew in our trial grounds 259 samples of seed wheat and barley from as many farmers. These samples were analyzed when they were ripe and classified as A. B. or C. according to whether they were of excellent, fair or poor quality. The result of the analysis showed that 46.3% were in A. class, 28.7% in B. and 24.2% in C.

THE SCHOOL FARM

The farm produced satisfactory crops of all kinds, although the season was far from perfect. Seeding conditions were ideal but we had dry and unusually hot weather for six weeks afterwards. This damaged the crop considerably and induced premature heading. Rains which came from June 20th and through July resulted in much second growth but in general a good crop was produced. Hay was cured with difficulty on account of the frequent showers.

The cropping system on the farm provides mainly for feed for live stock—barley, oats, hay and pasture but we grow a limited amount of wheat. We have been growing Reward for several years and while the quality has been good the yield has been disappointing. We are now growing Red Bobs No. 222. For years it has been the highest yielder on our trial grounds and it usually ripens without damage from frost. A forty acre field of it this year grown on summerfallow yielded at a rate of forty-two bushels per acre.

Most of the home farm is worked in a six year rotation as follows: first year, summerfallow; second year, grain with which is seeded a mixture of grasses and clovers; third year, hay; fourth year, hay or pasture plowed up in July or August; fifth year, grain; sixth year, grain. This provides for half the farm being in grain, one-sixth in fallow, and one-third in hay and pasture. Manure is applied to the grass land. The mixture sown for hay and pasture consists of timothy, sweet clover, alfalfa and a little western rye grass. Last year we substituted altaswede red clover for nearly all the sweet clover hoping to get a better quality of hay. We practically always get a good stand of grass and clover after summer-fallow. The land is firm, well supplied with moisture and with plant food readily available.

Several additions have been made to the live stock during the year. The old Shorthorn bull, Missie's Golden Key having reached the age of nine was sold. He has recently been replaced by a young bull, Roth 4th, from Mr. Claude Gallinger, of Tofield. This bull was second in a strong class at the Toronto Royal last November and is sired by Lord Roth, Grand Champion at the Canadian National Exhibition, Toronto, and Junior and Reserve Champion at the Royal in 1934. Two cows were also secured from the same source. These are Villiage Maid 60th by Brownsdale Premier and Good News by the same sire. Both cows have calves at foot sired by Lord Roth Mr. Gallinger's senior herd bull.

Six Ayrshire cows have been added to give additional specimens for class purposes. Two of these came from the herd of Mr. A. L. Young of Brooks, two from Mr. Bing Domoney at Red Deer and two from a herd at Camrose.

The three year old Percheron Stallion, Laet's Cleo (15017) was sold in March to Wm. McKinnon of Olds. He was travelled in this district during the summer. Two percheron stallions were shown at the Royal Winter Fair, Toronto, in November. On a two year old sired by Chief Laet and out of one of our best breeding mares, Cleopatra, we got seventh place in a strong class and on a stallion foal we were placed fourth. We have two stallions coming three for sale in the spring for breeding purposes.

Our small flock of Hampshires is retained at about the same size, twenty to thirty breeding ewes. Several ram lambs were sold in the fall, as well as the stock ram. The latter was replaced by a very good lamb from the E. P. Ranch.

We have sold a considerable number of Yorkshire hogs for breeding purposes and have retained a few gilts for our own use. A number of bulls both Ayrshire and Shorthorn have also been disposed of for breeding.

The stock on the farm is kept primarily for use in the class room for instructional purposes. It is impossible to keep representatives of many breeds of each class of live stock but we aim to have fairly good individuals of a number of the commoner breeds. In order to acquaint students with the type of other breeds occasional trips are made to the farms of breeders within fifty miles of the school.

We wish to extend our thanks to these men who welcome our classes and instructors year after year. In this connection we wish to mention Messrs. Norman Clark of Didsbury, Frank Collicut of Crossfield, J. Chas. Yule of Carstairs and F. H. Reed of the Lacombe Experimental Station.

VERMILION SCHOOL OF AGRICULTURE (S. H. GANDIER, *Principal*)

Following is the report of the Vermilion School of Agriculture and the School Farm for the Year 1937.

THE SCHOOL STAFF

Two changes in the school staff have occurred during the year. Early in October Mr. W. J. Elliott, Principal since 1925, was transferred to Edmonton to take charge of Youth Training projects and junior activities

for the Department. Mr. Elliott's transfer is a distinct loss to the school. To him must be given a large share of the credit for the rapid development and growth of the school during his term as Principal. Mr. S. H. Gandier, recently Assistant Deputy Minister of Agriculture and former member of the school staff, replaced Mr. Elliott as Principal. A. M. Wilson, Agronomist, obtained leave of absence in September to pursue graduate studies in the States. Mr. H. B. Peto was appointed as Instructor in Agronomy until Mr. Wilson's return. Two temporary appointments to assist with the instruction of the new Youth Training Classes were made in October, A. W. Mead, a graduate of this school and of the University of Alberta, taking over part of the work in Animal and Field Husbandry, and H. Armstrong assisting in the Mechanics Department and in the practical instruction on the farm. Following is the school staff for the regular term which commenced October 20th.

- S. H. Gandier, B.S.A., Principal, Instructor in Economics and Civics.
 D. A. Andrew, B.S.A., Instructor in Animal Husbandry and Veterinary Science. (Farm Manager)
 W. G. Malaher, B.Sc., Instructor in English and Mathematics.
 E. W. Cormack, B.Sc., Instructor in Animal Husbandry and Physical Training. (Dean of Residence).
 W. S. Scarth, B.S.A., Instructor in Mechanics.
 N. N. Bentley, B.A., B.Sc., Instructor in Science.
 H. B. Peto, M.Sc., Instructor in Agronomy and Botany.
 D. McCauley, Instructor in Blacksmithing.
 Miss M. E. Storey, Matron and Dietitian.
 Miss P. Shaw, Instructress in Sewing.
 Miss L. M. I. Milne, B.Sc., Instructress in Cooking and Household Administration.
 Miss M. C. McKenzie, R.N., Instructress in Home Nursing.
 A. W. Mead, B.Sc., Assistant with Youth Training Classes.
 H. J. Armstrong, Assistant with Youth Training Classes.
 P. A. Alt, Accountant and Bookkeeper.
 Mrs. K. Bell, Stenographer.

FALL AND WINTER COURSES

Registration for the six months term commencing October 27th is appreciably higher than that of the previous term, the increase being entirely due to the inclusion of the special Youth Training Classes. Total for the present term is 164 as compared with 141 in attendance last winter. Enrolment by classes is as follows:

Agricultural Courses—

First Year Boys	42
Second Year Boys	35
Two-in-One Boys	3
First Year Boys (Youth Training Class)	15
Special Course in Agriculture (Youth Training Class)	19

Home Economics Courses—

First Year Girls	27
Second Year Girls	17
Two-in-One Girls	6

Total enrolment (fall term)	164
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(N.B.—Two-in-One classes are students who are privileged to take the work of the Two Year Course in one school year because of advanced academical standing.)

Youth Training Classes.—These students were sent to the school shortly after the regular opening date, under the Dominion-Provincial Youth Training agreement. They will remain at the school for the period of the regular term which closes April 6th. Fifteen of these boys are sons of farmers resident in the dry area of the Province and these are taking all of the work of the regular first year course in Agriculture. The remaining nineteen boys are from cities and towns and have had little, if any, agricultural experience. For these a special course was devised in which the more practical phases of agriculture are emphasized, such as stock judging, field husbandry, farm management, carpentry, blacksmithing, farm machinery, etc. These special students also spend a part of their time at regular farm work in the stables and on the farm. These Youth Training Classes have undertaken their class work and other duties with enthusiasm, and are an asset to the student body in all of its social and athletic activities.

SHORT COURSES AND FIELD DAYS

The usual summer short courses were held during the month of July and are summarized below:

School Fairs Scholarship Short Course (July 12th to 17th).—This included those boys and girls from the northern half of the Province, including the Peace River district, who, by securing the highest total of points at their school fair in the fall of 1936, had won the Department of Agriculture Scholarship of one week's short course at the Agricultural School with all expenses paid. There were 35 boys and 36 girls in attendance ranging in age from thirteen to eighteen years. In the boys' course attention is given particularly to elementary agriculture and mechanics, while the girls devote their time largely to the simpler projects of Household Economics. The efforts of the Department and Staff in making this week both profitable and enjoyable for the boys and girls were fully appreciated by all in attendance.

Farm Women's and Men's Week —(July 19th to 23rd) — Farm Women's Week has been a popular course for a number of years, and the registration at the 1937 course would indicate that the opportunity it affords to the farm housewife for a week away from home duties in the congenial surroundings and atmosphere afforded by the school, is thoroughly appreciated. The enrolment of 64 ladies compares very favourably with the attendance of the previous years. A noticeable feature is the fact that quite a number of ladies are returning for the second time of the course. Farm Women's Week is now a more or less permanent event in the school's calendar.

As an experiment, a short course for Farm Men was offered during the same week as the women's course. Registration was somewhat disappointing, there being only thirteen men enrolled. It was felt however, that results were sufficient to attempt the course again another year.

Vermilion Exhibition Boys' and Girls' Camp (July 24th to 28th).—The school has co-operated in the last several years with the Vermilion Exhibition Association by providing living accommodation in the dormitories,

and courses of instruction, for the boys and girls attending the annual Exhibition Camp. This camp is financed jointly by the Exhibition Board and the Federal Department of Agriculture. The Province contributes the services of the school staff in supervising the camp and for instructional purposes. A three day programme of classes on agricultural topics for the boys and in Home Economics for the girls preceded the opening of the Fair. The camp membership totalled 118 boys and girls.

Field Days, etc.—A number of field days under the auspices of various organizations were held in the school grounds throughout the summer. It is estimated that during the month of July alone and including the short course registration, more than 1100 persons visited the school and inspected the experimental plots and the demonstration farm. Following are a few of the outstanding gatherings:

June 11—Forage Crops Day—95 persons.
June 25—Northern Alta. Clydesdale Breeders' Day—60 persons.
July 7—Social Credit District Constituency Picnic—350 persons.
July 8 to 10—Alumni Reunion—175 persons.
July 19—Women's Institutes District Convention—80 persons.
July 19—Vegreville Grain Club Day—33 persons.
July 24—General Grain Club Day—245 persons.
Aug. 4—Seed Grain Plots in co-operation with Grain Companies—70 persons.

SCHOOL FAIRS

The school is responsible for supervision of all school fairs in the northern half of the Province. The work comes under the personal direction of W. G. Malaher of the school staff.

Seeds were distributed to approximately 7,000 children in thirty-seven school Fair centres. This latter figure represents an increase of two Fairs over the previous year, new districts to organize being Dapp and Rosalind. All centres held Fairs as scheduled during the month of September.

Keen interest was evident at most points and the standard of exhibits was well maintained. At many points, however, the showing of live stock was small and it is felt that something should be done to encourage the children to exhibit in these classes. Entries at all Fairs totalled 31,392, or an increase of 25% over the previous year.

The publication of a new handbook greatly facilitated the work of teachers in the preparation of exhibits. The supply, however, was limited and in view of the number of changes recently made in the Department of Education section it is evident that a further supply will be required for 1938.

During the summer requests were received from a number of districts desirous of organizing in the near future. A.T.A. Locals and other district organizations appear to be anxious to lend their support to the School Fair Programme and to encourage the work wherever possible. It is probable that the number of Fairs will show a slight increase next year and that most, if not all of the centres, now operating will continue. Full details of the Fairs under the supervision of the Vermilion School of Agriculture will be found in the complete annual report on School Fairs.

JUNIOR CLUBS

For the past few years D. A. Andrew of the school staff, has acted in the capacity of District Agriculturist during the summer months, part of

his duties being the supervision of the junior grain and stock clubs of the district. In 1937 the closing of the district office at Willingdon enlarged his territory. In order to cope with the increased club work it was arranged that A. M. Wilson, also of the school staff, would assist Mr. Andrew. In September, a new appointment was made to the Willingdon district office, which has again reduced the club district for which the school is responsible, to its original proportions. Following are junior clubs now actively operating under the direction of the school:

Grain Clubs—Vegreville (wheat and oats); Borradaile (wheat); Northern Valley (wheat); Dina (wheat); Vermilion (flax).
Swine Clubs—Dina-McLaughlin; Northern Valley; Marwayne.

Satisfactory progress was made with the grain clubs in spite of discouraging moisture conditions for the first half of the season. Shortage of hog feed on account of poor crops throughout the district in 1936, had a depressing influence on hog clubs during the season just closed, a couple of clubs being obliged to disband. Present feed conditions are much better and interest in hog clubs is reviving at several new points.

THE 1937 CROP SEASON

Though early spring conditions in this portion of the Province were reasonably encouraging, lack of general rains, together with some heavy winds, through June to the middle of July resulted in considerable crop injury by burning and soil drifting, especially to the east and south. Heavier general rainfall in late July and early August revived the grain crop, but production on the whole was considerably below the average. Hay and forage crops were quite light, the long feed situation being greatly relieved by a good crop of greenfeed. Yields per acre for grains on the school farm were as follows

No wheat was grown this season.

Oats—27 bushels.

Barley—14 bushels.

Potatoes and other vegetables were a much heavier crop than usual, having benefited from the later rains of July and August.

Precipitation through 1937 by months is given below—

January	.80	July	2.76
February	.15	August	3.76
March	.15	September	.78
April	1.42	October	.50
May	1.77	November	1.00
June	2.15	December	.60

Total for the year was 15.8 inches as compared with an average of 16.54 inches for the past twelve years. During the growing season from May to August inclusive, rainfall was 10.44 inches, but it will be noted that much of the greater portion of this fell in late July and through August after the forage crop season, and too late for the normal development of the grain crop.

EXPERIMENTAL PLOTS

Extensive plot experiments have not been carried at this school for a number of years, this work now being confined to a limited area in grasses and forage crops, and row testing of grain samples obtained from farmers and supplied through the Elevator Companies and the District Agriculturists. These latter make valuable material for demonstration to the public of the mixed condition of grain being grown by many of our farmers and the need for greater attention to purity of seed.

In conjunction with the work being done by the Field Crops Department of the University with fertilizers on the various types of grey wooded soils, our Agronomist established plots of four acres on farms at several points last spring. These are to be continued over a period of several seasons. No data is available for release following the first summer's work.

Through the field husbandry department of the school, Buffalo Coulee Municipality became interested in the forage crop seed distribution policy of the Field Crops Branch, Edmonton, seed being distributed to a large number of farmers. The Municipality of Melberta has also shown interest in this policy and the northern areas of the Province are realizing the importance of grasses and other forage crops in the farm programme.

LEGUME CULTURES

The production of cultures for treatment of the seed of legume crops was resumed in the spring of 1935 and each season the demand is increasing. This year a total of 2374 cultures were sent out, being distributed to all parts of the Province. A single culture is sufficient for one bushel of seed, and available to farmers at a cost of 35c postpaid. Eighty percent of production is used for alfalfa and sweet clover. Cultures are provided also for the ordinary clovers, field peas, sweet peas, beans and vetch. They are prepared through the months of March to June inclusive by the Science Instructor.

THE APIARY

Sufficient colonies of bees are kept in order to test the possibilities of the district for bee-keeping. This fall nine colonies were placed in winter quarters under various types of wintering conditions. The apiary is augmented each spring with package bees imported from California to bring it up to required strength.

The honey season of 1937 was a rather unusual one for this district, heaviest flow taking place through June and being confined largely to the blossom of the wolf willow. In the average season heaviest flow is from sweet clover, commencing late in June and continuing through the greater part of July. The scale hive, a three pound package, showed a net gain of 141 pounds. Honey production for the season was lower than for 1936 by about 20 per cent.

Two varieties of bees, Caucasian and Italian, are kept. Comparative results indicate that either is satisfactory for honey production in this area.

THE SCHOOL FARM

The farm cropping system is designed to produce the maximum amount of fodder for the stock which is maintained for breeding and class room purposes. No wheat was grown in the 1937 crop season, grains being confined to oats and barley for feed. Alfalfa continues to do well, though some winter killing was experienced this season.

At present several methods of reclaiming alfalfa meadows are under test. The grass and clover fields are all attracting a great deal of interest.

During the dry hay season of this year Crested Wheat grass made an excellent showing as compared with brome and alfalfa.

The six year rotation plot was brought forward to the fourth year standing and results have been so encouraging that a section of the farm is now being laid down to this rotation.

In order to provide adequate pasture and more land for production of feed for stock now being carried, an extra half section known as the Scott Farm which adjoins the school farm at the south, was rented in the spring for a term of three years.

Stock on the farm at the close of the year includes 39 head of Clyde horses, 34 head dual purpose Shorthorns, 30 Suffolk sheep and 9 Yorkshire sows. Five Clyde colts were raised this year. One stallion and 3 registered mares were sold. Three Shorthorn bulls were sold for breeding purposes, also 7 Yorkshire boars, 9 gilts, 6 Suffolk rams and 3 ewes. Seven shearling Suffolk ewes and a Suffolk ram lamb were purchased and should materially improve the quality of lambs of the flock.

Date Due

OCT 19 '83

APR 30 '83

APR 29 RETURN

RETURN NOV 02 '00

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